

Technical **COMMUNICATION**

Journal of the Society for Technical Communication



A campfire with binary code floating around it.

**Storytelling
in Technical
Communication**

Technical COMMUNICATION

Journal of the Society for Technical Communication

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About the Journal

Technical Communication is a peer-reviewed, quarterly journal published by the Society for Technical Communication (STC). It is aimed at an audience of technical communication practitioners and academics. The journal's goal is to contribute to the body of knowledge of the field of technical communication from a multidisciplinary perspective, with special emphasis on the combination of academic rigor and practical relevance.

Technical Communication publishes articles in five categories:

- Applied research – reports of practically relevant (empirical or analytical) research
- Applied theory – original contributions to technical communication theory
- Case history – reports on solutions to technical communication problems
- Tutorial – instructions on processes or procedures that respond to new developments, insights, laws, standards, requirements, or technologies
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Kyle P. Vealey and Jeffrey M. Gerding

Introduction to the Special Issue: “The Work of Storytelling in Technical Communication”

By Kyle P. Vealey and Jeffrey M. Gerding

ON STORIES AND STORYTELLING

Stories are everywhere in our personal, public, and professional lives. From casual conversations and social media posts to published explanations of complex scientific information, the act of storytelling affords humans a rhetorical capacity to engage with one another and the world around us. Stories bring cause and effect together into a cohesive event, thus helping us make sense of and impose—even just temporarily—a sense of stability to an uncertain world. Through stories, we are also able to articulate the complexity of firsthand experience into knowledge that is social, shareable, and lasting. That is, storytelling helps us communicate complex ideas to one another, particularly in ways that increase not only comprehension but also engagement, curiosity, and even excitement. Stories and storytelling are, and always have been, at the heart of technical communication (TC). With its emphasis on characters, settings, descriptive language, metaphor, and narrative structure, stories are arguably one of the most effective ways of communicating

complex technical and scientific information—and as the articles in this special issue illustrate, the rhetorical potential for storytelling is far richer than even that.

Storytelling has a long history in TC, but until recently, it has been defined largely by a state of perpetual arrival—always arriving, never truly staying. Beginning in the late 1980s, Ben F. Barton and Marthalee S. Barton (1988) issued an early call to explore the existing “pervasiveness” of what they call narration in TC, despite such narrative elements being largely “devalued as a mode of discourse” (p. 36). Working against a constructed opposition between technical exposition and literary narratives, Barton and Barton argue that storytelling forms are already present in technical and scientific forms of writing: “one finds narrativity in such discourse genres as the scientific or technical article . . . [and with] projective scientific texts as scenarios, scripts, frames, simulations, games, case studies, and ‘what-if’ or ‘worst-case’ analyses” (p. 41). If taken more seriously, Barton and Barton wager, stories can help users read and use texts faster, process written content more effectively, and increase overall recall of information (p. 43).

In the decade after Barton and Barton’s call, Jane M. Perkins



and Nancy Blyler (1999) take up the question of whether the field has fully pursued the advantages of storytelling for communicating across technical and professional contexts. As they note, while the subsequent decade has seen an increased scholarly engagement with storytelling (particularly in understanding that stories are deeply rhetorical and that, in turn, rhetoric itself is a “storied” practice), the field’s “existing research on narrative is still limited, not necessarily in quality but rather in terms of the amount of scholarship produced and its scope” (p. 10). In a survey of 11 major journals from 1990–1997, Perkins and Blyler suggest the focus of much research is not directly engaged with storytelling itself—instead, stories are used to contextualize larger ideas, animate data, or create a broader sense of relevance for readers. They conclude with both an optimistic note and warning for storytelling’s role in future scholarship: “we predict that, 10 years in the future, our field will no longer be marked by the muteness Barton and Barton noted” (p. 28); however, the failure to take storytelling seriously will exclude and deny us access “to important work on the topic of the political nature of reality construction” (p. 21).

The Work of Storytelling

While the question of whether the field has fulfilled Perkins and Blyer's prediction is still debatable, it is clear that TC scholars continue to engage with stories and storytelling across a diverse range of topics. Specifically, stories and storytelling have shown up in research on DIY instructions (Van Ittersum, 2014), automotive repair work (Cushman, 2015), history of government nuclear facilities (Hirst, 2017), nonprofit organizations (Dush, 2017), pedagogical approaches to studying/teaching policy (Moore, 2013), scientific narratives and explanations (Forbes, 1999; Johnson Sheehan & Rodes, 1999; Journet, 2009), user experience and human-centered design (Ballentine, 2010; Jones, 2016), organizational crises and change (Faber, 2002; Marsen, 2014), empowerment of Black entrepreneurs (Jones, 2017), YouTube beauty community tutorials (Ledbetter, 2018), and historical accounts of marriage and maternity policies at IBM (Petersen & Moeller, 2016).

TC's quiet yet persistent and sustained engagement with storytelling was more recently examined by Nancy Small (2017), who noted that "as a discipline, we *use* stories and yet we seem to continue our indifference toward or even denial of acknowledging *storytelling* as a legitimate tool of the trade" (p. 238). To bolster our theoretical grounding for making storytelling a core feature of TC, Small suggests we clearly delineate what we mean by terms like narrative and story. Drawing from David Boje, Small describes narratives as coherent and often-linear accounts of

events, whereby a clear plotline is imposed retrospectively. Stories, on the other hand, come before coherent narratives are formed and solidified, composed in bits and pieces from a series of events as they are told and retold across multiple times, places, and perspectives. These kinds of stories are what Boje calls *antenarrative*. A subtle but core theme running through many of the articles in this special issue, antenarratives are at once the fragmented and polyvocal stories told *before* any narrative coherence settles and act as a kind of *bet* on the probable shape of future events. Importantly for TC research and practice, antenarratives can be enacted as both method and methodology for revealing and dismantling narrative calcification, that is, the fixity of meaning in a stable and coherent narrative. Indeed, Small argues that antenarrative opens up a "willingness to think dialectically, to embrace alternative interpretations, to (re)consider outliers and silences, and to put potentially competing narratives into conversation with one another" (p. 241), thus offering TC scholars and practitioners "one way to answer the recent call for foregrounding [the field's] role in promoting social justice" (p. 249). Antenarratives are transformational stories that invite different interpretations and imaginings of the future, bringing about, in Boje's words, "a future that would not be otherwise" (Boje, 2008, p. 14). Authors featured in this special issue not only employ Boje's antenarrative as a methodological framework, but also embody its spirit in reimagining the story of

TC and its importance to our often fraught and uncertain world.

STORYTELLING AND THE PURSUIT OF JUSTICE

With this issue, we want to mark a notable shift in TC scholarship and practice: storytelling, long relegated to a niche special interest, has become a central part of the work of many TC scholars and practitioners, particularly as a critical tool in the pursuit of justice. This change has been predicated in TC scholarship by the move away from "a pragmatic identity that values effectiveness" and "practical problem solving" toward a field that is more inclusive, committed to social justice, and eager to listen to multiple voices (Jones, Moore, & Walton, 2016, p. 212). Storytelling and social justice advocacy are closely intertwined, with scholars arguing for the importance not just of telling stories and amplifying the stories others tell, but actively "listening *for* stories as opposed to simply listening *to* stories" (Mangum, this issue) that foreground the experiences of the marginalized and oppressed.

In *Technical Communication after the Social Justice Turn*, Rebecca Walton, Kristen R. Moore, and Natasha N. Jones (2019) call for technical communicators to address and intervene in issues of inequality and systematic oppression through "intersectional, coalitional approaches" (p. 133). Central to such coalition building is the act of listening to multiply marginalized individuals, trusting the lived experience of those who point out injustices, and acting with

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humility rather than skepticism (pp. 134–136). “If we want to be allies,” they write:

We must all commit to learning more about injustices from those who experience injustices. Even those of us who experience our own forms of oppression can and should listen, learn, and engage with others whose experiences of injustice are different from our own . . . And if no one is telling you about injustices, that (of course) doesn’t mean injustices aren’t happening. (p. 136)

This invocation to pay attention to and seek out stories of all kind requires the field, particularly those of us “not living at the intersections of oppression,” to “listen more than [we] speak or lead” so that “the right answer, the next step, is localized and . . . driven by the collective agenda and the experience of those who have been and continue to be multiply marginalized” (p. 134). Indeed, the 4Rs heuristic introduced by Walton, Moore, and Jones (and revisited in this volume) reminds us that before the real work can begin, we must first strive to *recognize* and then *reveal* injustice, oppression, and our complicity in both (p. 133). As they write, “Revealing an injustice is a call to action, an investment, and a coalitional move on either end (either in the revelatory act or in the act of hearing, recognizing and accepting)” (p. 140). Through the acts of listening to, analyzing, amplifying, and prioritizing stories—especially those previously underrepresented in the field—scholars of TC open ourselves

up to coalition building and, in doing so, take steps toward the last two of the 4Rs, possible *rejection* and *replacement* of injustice and oppression (Walton, Moore, and Jones, 2019). Combining the rich history of storytelling in the field with the urgent work of social justice reinvigorates narrative research and offers an invitation to approach our work with humility and a renewed commitment to the communities and stories beyond our field, our institutions, and our organizations.

When selecting articles for this special issue, we looked for scholars attuned to such listening and coalition building in a range of contexts and with an array of methods and theoretical frameworks. In particular, we valued research that pursued social justice in ways that might challenge, inspire, and sustain the next wave of storytelling scholarship. The future of storytelling, we believe, is in recognizing the power stories have always had and, in doing so, advocating for research that digs deeper into what stories can be, can do, and can offer us as a field.

CONTENTS OF THIS SPECIAL ISSUE

The stories told, theorized, and applied in this special issue illustrate the versatility and wide range of potential storytelling still holds for TC. Moreover, they collectively show that storytelling is alive and well—and truly at home—in the field and profession.

In the issue’s lead article, Kristen R. Moore, Natasha N. Jones, and Rebecca Walton build on their work in *Technical*

Communication After the Social Turn (2019) by expanding their 4Rs heuristic—recognizing, revealing, rejecting, and replacing—for intervening into systems and practices of injustice. Specifically, in “Contextualizing the 4Rs Heuristic with Participant Stories,” they elaborate on how listening to and deeply engaging with participant stories in local contexts is often necessary to recognize social injustice in our day-to-day work and to begin the critical effort of revealing it to others. With a theoretical framework deeply informed by Black Feminist Theory, Moore, Jones, and Walton draw from interviews with TC scholars and practitioners to offer strategies for continually recognizing and revealing unjust practices in today’s workplaces. As they articulate:

Pairing *stories* with heuristics provides opportunities to expand beyond what the individual user of the heuristic might, themselves, imagine. Our data suggests that stories are important touchpoints for a Black Feminist framework to understanding inequities, and we offer these stories to invite and stimulate the critical imagination necessary for redressing inequities, forming coalitions, and building a more just future.

The article positions stories as a serious matter for social justice work, largely because storytelling affords us the ability to listen to, create, and share accounts of injustice in effort to ultimately enact more socially just practices and systems in the world.

The Work of Storytelling

In “‘Changing the Face of Technology’: Storytelling as Intersectional Feminist Practice in Coding Organizations,” E. Ashley Rea examines the resistance strategies used by activist computer programmers to counter the dominant, exclusionary narratives that marginalize women, especially women of color, in technical fields. Rea builds upon Aja Y. Martinez’s (2020) theory of counterstories, described in this piece as “cultivat[ing] community through representation of minoritized voices” in order to “illuminate and challenge existing systems of discrimination and move towards a transformative resistance.” Rea’s study describes the counterstory practices of five women in activist coding organizations who use a variety of coalition-building strategies to resist dominant technical industry narratives, such as facilitating community-building meetups and providing access to coding education. Identifying such practices as counterstory offers TC scholars and practitioners working toward social justice a framework for examining different forms of resistance as they play out across professional contexts both within and beyond the field.

Erin Brock Carlson and Martina Angela Caretta, in “Legitimizing Situated Knowledge in Rural Communities through Storytelling around Gas Pipelines and Environmental Risk,” make a compelling case for TC professionals to listen closely and carefully to the stories of rural landowners living alongside the ongoing development of natural gas pipelines. Drawing from stories of 31 residents of rural West Virginia,

they offer a way to engage these stories as a form of expertise rooted in lived experience. Doing so issues an increasingly important and timely call for TC professionals to not only acknowledge that “rural residents’ situated, place-based knowledge is expertise—expertise that should be valued by decision makers when environmental changes (and therefore, risks) are on the horizon,” but also amplify these stories of living in the wake of major technical and environmental development.

In “Amplifying Indigenous Voices through a Community of Stories Approach,” Richard T. Mangum heeds recent calls to apply an antenarrative analysis as both method and methodology in TC narrative scholarship. Specifically, he blends antenarrative analysis and indigenous storytelling methodologies in a case study of documentation surrounding the Dakota Access Pipeline’s construction in 2016–17. Through analysis of a corpus of documents organized into dominant and counter narratives, Mangum offers three models for understanding the relationships between these competing narratives. In the first model, “dominant versus counter narrative,” those who hold power delegitimize, replace, and erase existing counter narratives with those reflecting the dominant group; the second, “layered narratives,” avoids simplified binaries by acknowledging each story as a distinct and equal layer in a larger metanarrative; and the third, “community of stories,” avoids equalization in favor of recognizing the metanarrative as being comprised of many

diverse, overlapping, evolving, and relational stories. At the heart of Mangum’s work are three visual metaphors that illustrate these relationships, in order, with powerful images: water protectors facing off against a line of police in riot gear; a series of glass plates that create a single image when viewed together; and intersecting circles, one for each story, inspired by Indigenous hoop dancing. Together these models and their related visualizations offer TC scholars an approach for solving complex problems that rejects any one perspective in order to “look for, excavate, and amplify subordinated counter narratives.”

Sweta Baniya and Chen Chen’s “Experiencing a Global Pandemic: The Power of Public Storytelling as Antenarrative in Crisis Communication,” offers a timely application of antenarrative analysis to crowdsourced stories about the COVID-19 pandemic. Baniya and Chen look at two media platforms that allowed every-day people to submit stories of their experiences during the pandemic: the UnCoVer Initiative blog from China and the Nepal PhotoProject Instagram account from Nepal. They identified four different capacities of these stories—“critical storytelling and reflections,” “building collective knowledge,” “developing solidarity,” and “establishing coalitional spaces”—that demonstrate how “non-Western rhetorical practices and values” were used to “challenge the mainstream narrative and the power structure . . . to strive for equity and justice” in both countries. Through extended excerpts and vivid description of

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individual stories, Baniya and Chen develop a rich portrait of the ways antenarratives function to reveal, reflect upon, and reject injustices perpetrated by governments in times of crisis. In doing so, they call upon scholars and practitioners of TC and risk communication to “develop a more critical perspective on crisis relief policies and strategies” and to be “more aware of how collective knowledge can be built as a social justice action.”

In the final entry for the special issue, “From Homeless to Human Again’: A Teaching Case on an Undergraduate ‘Tiny Houses and Technical Writing’ Course Model,” Erin Trauth reports on a community partnership with Tiny House Community Development (THCD), a nonprofit whose mission is to build tiny homes and offer construction-based career training for community members experiencing homelessness. Throughout her piece, Trauth describes students listening to the stories of people THCD serves, weaving those narrative elements into the creation of instructional documentation, informational brochures, and a guidebook for a career readiness construction training program. Her teaching case exemplifies a pedagogical approach that suffuses storytelling throughout the complete lifecycle of a community partnership, highlighting how stories, in her words, “allow for students to truly understand the stories of those the organization serves, construct well-informed technical communication personas, and creating engaging, human-centered deliverables.”

CONCLUSION: SUSTAINING STORYTELLING IN TC

By asserting that storytelling is no longer in the process of arriving but is firmly, fully *here*, we also acknowledge an important facet of storytelling research in TC: it is in a constant state of evolving and changing, retelling its own story as practices and methods and values evolve to keep pace with movements both within and beyond the field. The six articles in this volume each show a mature, established arena for study, one that pushes deliberately and confidently toward new ways of thinking about and doing the work of TC. Rather than continuing to look backwards, we see the authors in this issue as laying down the beginning of a story that will be continued by those who see stories and storytelling as an invitation, a challenge, and a promise of more fruitful work to come.

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On the Cover



ARTIST'S NOTE

For this project, I decided to use a campfire because nothing quite depicts storytelling like the idea of sitting around a campfire with friends, faces lit from below, sharing stories. Fires, in general, have kept our species alive and served as a hub for storytelling for millennia. These stories have been of history, fiction, and everything in between. Telling stories is part of what makes us human and allows us to transform the future in some regard. More specifically, telling stories around a fire connects us to our roots and highlights years of transformations we have gone through by translating and transforming information.

Fires, themselves, tell either a story of destruction or transformation, depending on how you look at them. I chose to view them as mediums of transformation, much like technical writing is for information. So, I

placed binary code on the logs to show that it was once in one form, then depicted bits and pieces of binary code spewing from the fire like sparks as it transformed into something new. I also added a layer mask to the image and a drop shadow to the title to create a smokiness that fit the theme and softened the image.

ABOUT THE ARTIST

As an undergraduate at Eastern Kentucky University, **Kristen Foreman** studies English and Biology. These two disparate fields promote Foreman's passion to further scientific understanding through research and efforts to make scientific knowledge more accessible to the layperson. As such, she is interested in promoting exploration of the creativity inherent in nature through her designs. She is available at foreman.kristen12@gmail.com.

Contextualizing the 4Rs Heuristic with Participant Stories

By Kristen R. Moore, Natasha N. Jones, & Rebecca Walton

ABSTRACT

Purpose: This article explores the strategies technical and professional communicators use in addressing issues of social injustice in their daily lives, including academic workplaces and communities. In embracing a storytelling approach and Black Feminist epistemology, we explore the limits of traditional heuristics, illustrating the need to couple storytelling and lived experience with heuristic frameworks.

Method: This study employs a qualitative, narrative inquiry methodology and semi-structured interview data collection approaches.

Results: Two elements of Walton, Moore, and Jones' (2019) 4Rs heuristic were expanded upon and further articulated through participant stories. To help people develop the ability to *recognize* injustice, data identified three sources for building expertise: lived experience, reading and proximity to lived experience, and accumulation within and across experiences. *Revealing* injustices occurred through both planned, often written, responses and in-the-moment responses.

Conclusion: Stories and lived experience can augment our understanding of how heuristics work in context and provide a source of critical imagination for those attempting to use heuristics.

KEYWORDS: Social Justice, Workplace Writing, Heuristics, Narrative Inquiry, Black Feminist Theory

Practitioner's Takeaway:

- Heuristics are often used to simplify the work of technical communicators; stories and storytelling practices can aid in the localization of heuristics, particularly when entering into communities affected by systemic inequities.
- The ability to recognize injustice in the workplace (and elsewhere) accumulates through lived experience—one's own experiences and the experiences of others.
- Written communication can play strategic roles in the work of revealing injustice in the workplace.

INTRODUCTION

It is no secret that inequities and other kinds of injustice exist within professional spaces, including in academic workplaces (Gutiérrez y Muhs et al., 2012; Mathew, 2016). And, as advocates of a more socially just world, when we recognize an unjust process or terminology or practice, we want to replace it. But replacing is often institutionally complex. When a company hires a new UX specialist, for example, the interview process is often dictated by both organizational and historical norms, even if the standard practices are steeped in exclusionary language (e.g., using a term like "wizard" to describe ideal candidates) and technology (e.g., turning on closed captioning during Zoom interviews only if requested by candidates). As these examples suggest, replacement of these practices is rarely possible to do unilaterally or individually. Often it requires coalitions—or groups of people who are at least temporarily aligned in working together toward a common goal. Yet, in organizations such as universities and corporations, these efforts are typically siloed (i.e., centralized in one area of the organization like human resources in corporations or a diversity office in universities) (Ahmed, 2012). And the work of these siloed units tends to focus on individual bad behaviors, a focus which is not particularly useful for enacting institutional change.

Walton, Moore, and Jones (2019) introduced a heuristic, called the 4Rs, developed to support people in intervening against injustice:

1. First, one must *recognize* injustice is occurring.
2. The second step is *reveal*: putting together a coalition and calling upon a coalition to recognize, together, the problem. Drawing together this group can not only bring to bear a range of resources and perspectives but also build momentum for institutional change.
3. The third R is *rejecting* the unjust practice or process, an important step that sweeps clear a path for the constructive work of . . .
4. *Replacing*, which is the fourth R; this refers to both the dismantling and replacing of systems and the replacement of small acts of inequity and injustice.

Shortly after the 4Rs heuristic was published, the Office of Equity at Utah State University developed a new set of implicit bias training materials based directly on the 4Rs. They trained the deans and their respective

leadership teams for all eight colleges using these materials, inviting feedback through conversations with trainees as well as through a post-training survey. Feedback from participants suggested that, alone, the 4Rs heuristic may not be sufficient to support people in engaging in the critically imaginative work necessary to get started (i.e., to recognize injustice as such when one encounters it in the mundane contexts of one's daily work). Similarly, people can struggle with strategies of revelation: What's the most effective way to reveal injustice to others?

Feedback from training attendees suggested they needed rich, localized narratives to supplement the heuristic. People came to the training from a range of starting places: some were brand new to the concept of implicit bias, while others had already engaged in deep reflections on equity, justice, marginalization, and other related topics. And the Office of Equity found that whether attendees needed to get started with introspection or just needed support in enriching the understandings they'd already developed, narrative was important: rich stories of human experience that reveal oppression in localized, and therefore very recognizable, ways.

This on-the-ground use of the 4Rs confirmed some of our own suspicions about the 4Rs: in order to make the heuristic really useful, it needed to be situated within contexts of use and lived experiences of redressing inequities. Our approach to situating the 4Rs within contexts of use included a narrative inquiry study, wherein we asked technical communication and rhetoric scholars who pursue social justice in their daily work to describe their interventions. We report a subset of our findings here.

LITERATURE REVIEW

Across the field of technical communication, heuristics have been used as tools for decision-making and design. One prominent example of heuristics is in Selber and Johnson-Eilola's *Solving Problems in Technical Communication*. In each of the books' chapters, authors provide readers with a heuristic for thinking about and addressing the topic. Spinuzzi's (2013) chapter on organizational research is an apt example: not only do we learn from him about the ways organizational research unfolds in a case, but we also finish the chapter learning how we can use the best practices in

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organizational research in our own work. In providing the heuristic, Spinuzzi, like other authors, provides a portable frame for translating theory into practice in a variety of contexts. This is the draw of heuristics: they often bridge the particular and the abstract.

In web design and usability, heuristics help designers both evaluate (Donker-Kuijer, de Jong, & Lentz, 2010; Nielson, 2005) and make iterative design decisions (Rose & Cardinal, 2021). In other contexts, heuristics offer more expansive affordances: Simmons (2007), Sackey (2020), and Moore (2016), for example, offer heuristics as ways to design and develop ethical and just approaches to public engagement with environmentally risky projects and large-scale government planning. In these and other cases, heuristics broaden and sometimes even shift expectations as groups deliberate and make decisions.

Because of these affordances, we three have also developed heuristics in our collective work. In both “Disrupting the Past to Disrupt the Future” and *Technical Communication After the Social Justice Turn*, we employ heuristics (the 3Ps and the 4Rs, described above) to aid other technical communication scholars in their attempts to employ social justice in their specific contexts.

As we discuss in these (and other) works, in the past two decades, the field of technical and professional communication (TPC) has experienced a social justice turn, wherein scholars acknowledge the need to address the injustices brought about by the field of TPC. In 2012, Haas articulated the frustrating reality of teaching graduate students about race and technology in the field of TPC; after cobbling together readings for her students, she called on the field to develop its understanding of race, oppression, and colonizing practices more fully. In 2013, Agboka challenged the field to consider social justice within our methodological approaches. Drawing on decolonizing and participatory methodologies, he troubled the field’s positivist foundations and demonstrated the harm done to localized communities when our methodologies fail to engage justly with our participants. In 2011, Savage and Matveeva also connected social justice to our programmatic endeavors, arguing for the need to consider representation and diversity in our curricula and classroom practices. We joined these authors in 2016, seeking to disrupt traditional narratives about

TPC that marginalized efforts towards integrating social justice into the fabric of our field.

Extending from the cultural turn and the acknowledgement of social constructivism, the social justice turn has resulted in several key claims or threads of research:

- The field of TPC should address issues of diversity, equity, and inclusion in its academic programs (Agboka, 2013; Dayley & Walton, 2018; Eble, 2020; Gonzales & Baca, 2017; Jones, Savage, & Yu, 2014; Savage & Mattson 2011; Savage & Matveeva 2011; Popham, 2016);
- Although the field of TPC engages in science and technology (and the communication surrounding both), neither science and technology nor the field’s communicative approaches are neutral—they often are complicit in systems of oppression (Haas, 2007; Sackey, 2018; Sano-Franchini, 2017);
- Although all scientific and technological endeavors intertwine with systemic injustice, some areas are particularly important for TPC to pay attention to: health and medical communication (Novotny & Hutchison, 2019; De Hertogh & DeVasto, 2020; technology design (Kim & Lane, 2019; Tham, 2020); public policy and participation (Jones & Williams, 2017; Moore, 2016); data and information practices (Atherton, 2021); workplace practices and policy (Edenfield, 2018; Petersen, 2019); and intercultural and global communication (Acharya, 2019; Baniya, 2019; Petersen & Matheson, 2017; Veeramoothoo, 2020; Walton & Hopton, 2018); and
- Social Justice endeavors can and should engage with a range of topical, theoretical, and methodological approaches, including disability theory (Zdenek, 2015, 2019), queer theory (Dadas & Cox, 2019; Edenfield, 2019; Green, 2020), feminist theory (Frost, 2016; Tham, 2019), theories of decoloniality (Agboka, 2013; Haas, 2012; Itchuaqiyaq & Matheson, 2021), trans theory (Sanchez, 2019), intersectionality (Gonzales, 2019), critical race theory (Martinez, 2018, 2020), and many, many others.

As might be obvious, the social justice turn has been handily taken up by a range of scholars in TPC. As we say in our 2016 article, however, there is still more work to do, even five years later. In order to effectively elaborate on the application of our 4Rs heuristic,

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we turn to Black Feminist Theory, a theoretical approach that unabashedly entangles activism and the development of theory. Black Feminism helps explain the ways that the participants in our study articulated their own knowledge about activism and the 4Rs. In exploring with participants how they understood the institutional oppression they worked to recognize, reveal, reject, and replace, we learned that dialogue and lived experience are *central* to the work of recognizing and revealing injustice.

BLACK FEMINIST THEORY

Black Feminist Theory is an expansive theoretical perspective that establishes a feminism that centers, supports, and responds to Black women's experiences in the world. Although historically Feminist Theory has been taken up by scholars in technical communication (Frost, 2016; Koerber, 2000; Smith & Thompson, 2002), Black Feminism has only just begun to shape the way TPC frames and enacts its work (Moore, 2018; Shelton, 2020; Walton, Moore, & Jones, 2019). As Shelton and Moore demonstrate, however, Black Feminist Theory has the potential to create ethical and just guidelines for our work in TPC. We are specifically drawn to Black Feminist Theory because it encourages an epistemological shift away from the empirical and imperial logics that dominate TPC and towards an embrace of lived experience and stories as legitimate and valuable sources of knowledge.

In contradistinction to the (perhaps navel-gazing) theories of the academy, Black Feminist Theory grows out of action, stories, and lived experiences. Black Feminist scholar Ula Taylor (1998) explains:

[T]he historical evolution of Black feminism in the United States not only developed out of Black women's antagonistic and dialectical engagement with White women but also out of their need to ameliorate conditions for empowerment on their own terms. (p. 235)

In her historical account of Black Feminism, Taylor locates Black Feminist Theory in activist actions taken by Black women, demonstrating the centrality of *doing* as the basis of the theoretical perspective. For the purpose of our study, the nature of the *doing* is worth noting here: Black women's activism worked to empower Black women (and others) who have

traditionally been marginalized by dominant power systems. Rising up out of abolition and civil rights efforts, Black Feminism took shape in its work, indivisible from the material, institutional, cultural, and emotional experiences of Black women activists. The stories of activists *are* Black Feminism.

Black Feminist Theory prompts us (as research-minded scholars and action-oriented practitioners) to shift our methods and heuristics: What kinds of stories and lived experiences can help clarify our theory? How can we build theory in and with experience, and how can we develop action- and decision-oriented heuristics that account for (rather than sideline) lived experience?

In 1998, Taylor argued that Black Feminist Theory grew out of the lived experiences of Black women fighting to address abolition and civil rights. Other key activists like Angela Davis, bell hooks, Audre Lorde, and Toni Morrison similarly respond to the need for civil rights and political justice. Out of her experience of working as a Black Panther, Davis (2011, 2012) provides a library of Black Feminist political approaches to domestic and global problems, including the prison-industrial system (and particularly the for-profit prison-industrial system). In Audre Lorde's body of work (including essays, poems, and memoirs), Lorde writes from her experience as a Black lesbian to explore how we can and should address injustices around us. In "The Transformation of Silence into Language and Action," for example, Lorde (1984/2020) writes from her experience recovering from cancer to articulate a theory of power, silence, and language; her theory extends through an ethic of care with and from others. She writes:

The women who sustained me through that period . . . all gave me a strength and concern without which I could not have survived intact. Within those weeks of acute fear came the knowledge—within the war we are all waging with the forces of death, subtle and otherwise, conscious or not—I am not only a casualty, I am also a warrior. (p. 41)

While Lorde's prose reads unlike other theories of power and knowledge, we rely on in the TPC field, the strength of her theory *is* the experience; indeed, the experience and the theory are one in the same. Elsewhere (Walton, Moore, & Jones, 2019), we use these and other activists' work to articulate a theory of social justice for the field of technical communication,

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predicated on the potential for our action-oriented field to build with and from Black women's work. But we draw attention here to the ways Black Feminist Theory does theory differently: it does theory in action, theory in experience, theory in relationship, and theory in dialogue. And as such, it requires theory with care and personal accountability.

Arguably, in the decades since Taylor's 1998 article, an additional wave of Black Feminism has emerged, as Black women leaders have come to the forefront of political action in response to the unjust killing of Black men, women, and children at the hands of the police. Alicia Garza, Patrisse Cullors, and Opal Tometi founded #BlackLivesMatter, an organization and movement dedicated to creating visibility for police brutality against Black communities. In the 2020 Presidential elections, Stacey Abrams, and other Black women activists like LaTosha Brown, led the country in addressing Black voter suppression. In these recent stories of Black women leading the country towards a more just political and policing system, we recognize aspects of Black Feminist Theory in action and *as* action.

A particularly influential contribution to Black Feminist Theory is Patricia Hill Collins' (2008) four tenets of Black Feminist epistemology, which provide a heuristic for making and assessing knowledge. Collins' (2008) tenets can be summarized as follows:

Lived Experience as a Criterion of Meaning:

Locating wisdom in knowledge differentiates between education and experience and reveres experience as a way of understanding the world (pp. 275-279).

The Use of Dialogue in Assessing Knowledge

Claims: Valuing the antiphonal back-and-forth that generates knowledge through discussion rather than adversarial debate (pp. 279-281).

The Ethics of Caring, Emphasizing the

Expressiveness: The emotions and empathy required to validate and build knowledge (pp. 281-284).

The Ethic of Personal Accountability: Reflecting on the relationship between the knowledge claim an individual makes and assuming responsibility for

it vis-à-vis, connecting to an individual's character, values, and ethics (pp. 284-285).

Further, Collins asserts that Black Feminist "epistemology uses different standards that are consistent with Black women's criteria for substantiated knowledge and with our criteria for methodological adequacy" (p. 275).

And, in our own field, Black women are shaping and extending our understanding of the role empowerment and activism can and should play in our work as professional and technical communicators. When Natasha Jones, for example, was the chair of the 2018 national conference for the Association for Teachers of Technical Writing, she (along with co-chair J. Blake Scott) devised the first-ever plenary panel, imagining it not just as a single talk, but instead designing a series of dialogic conversations between junior and senior scholars in the field. That's a form of Black Feminist knowledge-making, brought to the field by a Black woman scholar. In "Shifting out of Neutral," Cecelia Shelton (2020) enacts and explains Black Feminism by articulating her own positionality and lived experience as an opening for her pedagogical approach to teaching professional writing, positioning her scholarship within the Black Feminist tradition, and offering up her experience for others who teach professional writing. That's a form of Black Feminist knowledge-making, brought to the field by a Black woman scholar. Kimberly Harper's (2020) scholarship on Black women's maternal health extends from lived experience and challenges technical communicators to approach their rhetorical work with an ethic of care. In her talk at the #BlackTechComm panel, Harper articulated a "Black rhetorics of health communication, BHRC for short," which is rooted both in lived experience and in an ethic of accountability. BHRC, Harper explained:

Explicitly focuses on the experiences of Black patients and is grounded in the African rhetorical concept of nomo, which acknowledges the power of the word. So your word is your bond . . . You are required to be truthful and honest, and the word both written and spoken have the power to bring good into our worlds.

That's a form of Black Feminist knowledge-making, brought to the field by a Black woman scholar.

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At its heart, Black Feminist Theory rises up out of lived experience—the struggle to solve problems and to empower those at the margin—often emerging from stories and activism. To seek answers about how people intervene for social justice using the 4Rs, we developed our methodology through these tenets of Black Feminism:

- If we wanted to learn about activism, we should *engage dialogically*.
- If we wanted to learn about social justice, we should explore the *lived experiences* of those intervening for justice.
- If we wanted to study the activist, social justice approaches our colleagues were using, we needed an ethic of care *and* personal accountability built into our methods.

Drawing on Black Feminist Theory, we agreed that stories should be at the center of our project, for lived experience to motivate our study. And in the next section, we articulate our research methodology, further explaining the ways Black Feminist Theory motivated and shaped our narrative inquiry study.

METHODOLOGY AND METHODS

Our methodology, narrative inquiry, draws together Black Feminist Theory and more traditional qualitative research methods so as to highlight lived experiences through stories. As Jones (2020) notes, “when used critically with an eye to decolonizing, narrative inquiry—concurrently a methodology, perspective, and practice—calls for us to listen and privilege the particular and lived experiences, especially those of the multiply marginalized” (p. 520). Storytelling practices themselves have a long history in Black and Indigenous ways of learning, knowing, and being. Narrative inquiry, as described by Clandinin and Connelly (2000), pays special attention to place, temporality, and sociality. And while these narrative inquiry commonplaces were considerations for our study, we broadened our conceptualization of these themes using a Black Feminist perspective. That is, we sought to simultaneously grapple with the ambiguity, power dynamics, and interdependent nature of experience as narrative and narrative as experience. We sought participant stories that specifically address the ways in which participants intervened for social justice in their workplaces: how they encountered, recognized,

and resisted oppression for themselves and on behalf of others. We listened carefully to the stories of marginalized scholars who shared their experiences with us, and we listened to the experiences of scholars from a multiplicity of positionalities whose lived experience involved addressing and redressing oppression in a variety of circumstances and contexts.

In an effort to gather stories, place these stories in conversation with one another, and “demand a thoughtful response” of ourselves and our field (Royster, 1996, p. 30), we engaged a narrative-oriented interviewing approach. As Tracy (2013) notes, interviews are appropriate for exploring complex ideas that aren’t easily observed or accessed, and they should be used when deep, rich narratives or accounts are needed to answer the research question. We interviewed 24 TPC scholars who considered social justice relevant to their work; although participants varied in their specific areas of research or training, all participants were current or former academics working within TPC or a closely related field. We sought answer to the following research questions:

1. How have researchers in TPC worked to replace unjust or oppressive behaviors in their sites of work?
2. How does positionality and margin of maneuverability affect the ways participants reveal and reject unjust or oppressive behaviors?
3. How do participants identify, articulate, or describe situations in which they have recognized oppression or injustice?

Our IRB-approved study was designed using a modified snowball sampling approach that we call “coalitional sampling,” in which we asked participants, “Who’s in your coalition? Whose work do we need to learn about?” Ultimately, we listened to the stories of 24 scholars who varied in career level, university type, geographic location within the United States, and identity markers and characteristics (e.g., race, gender, ethnicity). Many participants identify as marginalized or multiply marginalized, and in our recruitment we sought varied representation across race, gender, and other identity markers. Here, it’s worth noting that although our participants had academic titles, many of them discussed stories and experiences from non-academic contexts: the stories we report come from governmental agencies, community-based organizations

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and NGOs, and large corporations, as well as university workplace contexts.

In addition to sampling through a coalitional approach, we also conducted the interviews as a coalition (rather than individually). For each narrative interview, at least two researchers engaged with the participants. Typically, one would take the lead on asking questions, while the other would take notes and ask follow-up questions. Interviews were audio recorded and transcribed, and the transcription was shared with participants as a form of member checking. Immediately following each interview, the researchers also wrote individual reflective memos. Finally, using memos and the transcribed interviews, we conducted thematic coding for the 4Rs (recognize, reveal, reject, and replace).

Table 1. Research Design Overview

Number of Participants	24
Method	Semi-Structured Narrative Inquiry Interviews
Methodology	Narrative Inquiry, Black Feminist
Platform or Mode of Interview	Video Conferencing
Data Collection Methods	Recorded Audio, Hand-written Notes, Reflective Memos
Sampling Approach	Coalitional Snowball Sampling, Targeted
Recruitment Method	Email Query
Length of Interviews	Approximately 1 hour (41-minute minimum; 74-minute maximum)

Our interview sessions lasted between 41 minutes and one hour and 15 minutes, and in total we collected just under 22 hours of interview data. These interviews were recorded, transcribed, and uploaded into NVivo. The thematic codes reported in this article emerged from analyzing the data according to our 4Rs heuristic. Participant stories were read and then analyzed for each stage of the 4Rs: recognize, reveal, reject, replace. We developed this framework with a goal of moving from critical analysis to critical action (Walton & Rose, 2015), seeking to contextualize our heuristic for

engaging in coalitional, socially just change-making within academic and professional organizations. In reporting a subset of our findings in the Discussion section below, we provide exemplars from the data to preserve the storied nature of our data *while also* honoring the readers' (and publication's) need for digestible and reasonably sized reporting.

The 4Rs draw upon Black Feminist theoretical orientations that inherently call for theories as praxis, grounded in lived experience, attuned to issues of accountability as well as ambiguity, while negotiating power dynamics that can amplify or constrain ways of making meaning. Congruent with this Black Feminist perspective, our motivation for creating the 4Rs heuristic was to provide scholars with a way to redress inequity. But one cannot reject and replace oppressive practices without first recognizing them as such and revealing the recognized injustice (Walton et al., 2019, p. 133). In the Discussion section below, we discuss how these first two R's surfaced in the narratives of scholars who shared their stories with us.

DISCUSSION

In this section, we share findings related to the first two R's: recognize and reveal. Illustrated by stories from participants in TPC working to intervene for justice, this section helps us to better understand what makes someone able to recognize injustice as *injustice* when they encounter it at work and the strategies people use to reveal that injustice to others.

Each participant offered a number of stories about how they intervened in or addressed injustices, and these injustices varied wildly:

- A bureaucratic IT system deadnames a member of an organization.
- A community grant project procedurally and systematically excludes non-white community members.
- A supervisor offers unequal compensation for work across different racial groups.
- A hiring committee member questions the relevance of a BIPOC applicant's skills while praising a white male applicant's skills.
- A student in class uses a racial slur.

These are just a few examples, but they demonstrate that TPC scholars and practitioners are engaged in social justice work at varied levels and in a range

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of contexts, from the industry workplace to the community to the classroom. In our interviews, participants' narratives helped us understand more concretely how to intervene in these and other injustices. One key takeaway from the study that's useful to keep in mind is that these strategies are applicable across contexts, that workplaces (e.g., NGOs to corporations to start ups) inhere particular power, privilege, and positionality complexities that require focused attention to navigate and change.

Recognition Accumulates Through Lived Experience

Even according to the experts whom we interviewed, the ability to recognize injustice remains elusive—often connected to gut instinct or, as one participant said, “spidey sense.” When participants offered examples of interventions against injustice, we asked, “How did you *know* it was an injustice?” or “how did you *know* it was oppressive?” Narrative data related to recognition of injustice suggested that **the ability to recognize accumulates through lived experience**. Or, put another way, knowledge-making about injustice requires valuing lived experience, as highlighted in the first tenet of Black Feminist epistemology. In this section, we home in on two aspects of that finding: the kinds of lived experience that help people to recognize injustice and how that experience may accumulate.

Relevant Lived Experience

What kinds of experience helps people to develop the ability to recognize injustice when they encounter it in their sites of work (and other places, too, for that matter)? Black Feminist scholarship (e.g., Collins, 2008) has long noted that people who are multiply marginalized—say, women of color, for example—accumulate a lot of direct experience of oppression over many areas of their life over time, conferring upon them an expertise in oppression. Congruent with this scholarship, we found that this direct experience of being oppressed connotes expertise in *recognizing* oppression, even when that oppression does not personally affect oneself:

I think that there are a lot of instances where, I don't want to say a lot of times, [sighs] the fight comes to me, but it does, you know. [...] So I mean, sometimes it's just, like, the shit I'm swimming in.

As illustrated in the quote above, for some participants, oppression was often the “shit they swam in” as they experienced injustice in many areas of their life, to include the workplace.

But direct, personal experience was not the only way that participants accumulated expertise in recognizing injustice. Many participants credited reading work by authors with marginalized identities with the participants' own ability to recognize injustice when they encountered it in the workplace: for example, reading Black Feminist Theory, reading queer theory, reading popular press books by and about the lived experiences of marginalized people—especially people with identity markers different from their own (e.g., different gender or race). This engagement with reading about injustice raised some participants' awareness, helping them to recognize injustice. A similar type of lived experience that helps people to recognize injustice includes having relationships with people whose identities—and therefore experiences—differ from their own. Like reading, these relationships enabled participants to accumulate knowledge about recognizing injustice by listening to others' experiences. A final key was reflecting on what they had experienced, read, and heard. Reflection seems crucial to developing a kind of “spidey sense” that tingles in the moment and enables people to recognize that something is not simply unfortunate; it's unjust.

The narrative below is representative of this lived experience, beginning with relationships with others, reading scholarship by marginalized authors, and feeling affected by it upon reflection:

I think part of my enculturation started with hanging out with feminists when I was an undergraduate . . . And then in reading people like Paulo Freire and Karl Marx, even, and bell hooks and Gloria Anzaldúa and, um, just being like, this [injustice they write about] is fucked up, right? [...] I just remember my 20s as just being a really emotional time of caring about the world a lot. [...] I've been trained into certain ways of feeling about the world, um, intellectually, and affectively. I can't fully separate those, but right, and you just see something that's wrong, and you, you want to do something about it.

It is important to acknowledge that *reading about* oppression does not equate with *directly experiencing*

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oppression. Afterall, as the first tenet of Black Feminist epistemology asserts, lived experience confers valuable knowledge and expertise. But this finding—that the ability to recognize injustice accrues through one's own lived experience of oppression, as well as through exposure to and reflection upon other people's lived experience of oppression—is particularly instructive to scholars who do not directly experience many types of oppression themselves. Those who occupy positions of privilege and who want to be “accomplices” in justice work will need to do more “homework.” It is through reading, learning about, and reflecting upon the lived experiences of marginalized people that accomplices can hone their ability to recognize injustice, including injustices they do not experience directly.

Accumulation — Within and across experiences

When asked about how they *recognize* injustice, participants told stories that demonstrated not only that lived experience shapes their recognition but also that the ability to recognize accumulates both within and across their experiences.

Accumulation within an experience

One participant, for example, tells a story that illustrates how their understanding of justice accumulated within the experience of a particular hiring process: although it wasn't immediately clear that the hiring process was unjust, the participant's discernment built over a series of small events within the single experience of trying to make a hire.

In this story, the participant's department attempted to make a “diversity line” hire, but over the course of the hiring process, little discrepancies from the typical process started piling up. When a candidate arrived for a campus visit, an expense that the university typically covered directly wasn't paid for, so the candidate had to self-pay and put in for reimbursement:

So, you know, as an isolated incident, I was just like, “Well, that sucks.” You know, like, “That’s weird.” Nothing like that happened to me on my visit, but, like, maybe someone just truly made a mistake. But it was like things kept happening.

In meetings with university administrators, candidates encountered some caginess and unwillingness to share information. Then there was another discrepancy in the campus visit agenda for these candidates versus others

in past visits. The participant explained that, as they became aware of these discrepancies, the participant started wondering why this hiring process had so many seemingly small differences from the typical hiring process. Their “spidey sense,” a nagging feeling that something was amiss, began to tingle: “So it was like an accumulation of things where [I was] kind of like, ‘hmm.’”

A final problem confirmed the injustice: a significant omission in the offer package made to the diversity hire compared to a recent hire in the same field. When the candidate negotiated to request the omitted benefit, they encountered what seemed like feigned surprise that such a benefit would be requested, despite the same university unit having recently offered that particular benefit in an initial offer package to a recent hire in the same field. Discrepancy upon discrepancy, caginess in meetings with university representatives, differences in the campus visit agenda, and, finally, a less-competitive offer package. The participant explained that the accumulation of related incidents finally culminated, and they knew it was not a mistake or innocent difference of process; it was injustice.

Accumulation across disparate experiences

But recognition of injustice can also occur across disparate experiences. Participants explained that because they are attuned to injustice across different areas of their lives, they were able to recognize an instance of injustice when it cropped up. They were ready for it. In this story, a participant was meeting with an undergraduate student team comprised of several women of color and a white man. The man lamented to his teammates how hard it was for him to get an internship, especially as a white man. The participant immediately recognized that remark as a microaggression and initiated a conversation with the student team to reveal it as such.

When we asked the participant, “How did you know? How did you recognize that comment as microaggressive in the moment?” they explained that at the time, they were reading Safiya Noble's *Algorithms of Oppression*, so they were thinking about the hidden ways that oppression manifests, and they were teaching a class on technology design and had just been talking with the class about how design can discriminate, and they were working on a research team in which they

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had to keep reminding their research partners about recruiting from marginalized communities because if they didn't, then their findings would represent only the perspectives of dominant groups: "It was my spidey sense. [...] It just felt like it [injustice] was all, it was in the air. It was all around."

So it was from within this context of reading and teaching and researching injustice that the participant encountered a student microaggressing his teammates by implying that they can more easily secure internships because of their marginalized identities. And the participant explained, "And I had that feeling of, like, not again, not a project that I care about deeply. We're not gonna do that."

To summarize this finding, the ability to recognize injustice accumulates through lived experience. Relevant experiences include direct experience of oppression oneself, as well as encountering (e.g., through readings or relationships) and reflecting upon the experiences of others, especially those whose identities differ from oneself. The accumulation of relevant experiences can occur in at least two ways: 1) when seemingly small, related incidents accumulate to signal injustice, and 2) when one is attuned to injustice across multiple areas of their life, which helps them to immediately recognize injustice when they encounter it.

Stories about recognizing injustice offer TPC scholars and practitioners useful starting points for developing their own skills at recognizing injustice:

- Expertise in recognizing injustice requires lived experience. It can't be achieved through abstract engagement with ideas alone.
- Expertise in recognizing injustice for multiply marginalized or underrepresented (MMU) scholars is embodied and accumulates over time by nature of *living as* a marginalized person.
- Expertise in recognizing injustice can be developed purposefully. It emerges through the targeted cultivation of long-term engagement to educate oneself about injustice: listening to folks impacted by injustice, reading about others' lived experiences of oppression, and reflecting upon what one has heard and learned. For folks with more privilege, developing this ability to recognize oppression requires intentionally, reflectively working to attune themselves to it.
- We don't always immediately know the difference between a mistake/discrepancy and an actual

injustice. Even for MMU folks, there can be moments of questioning (e.g., "Was that really what I think it was?"). But when we are attuned to our "spidey sense" and acknowledge our experiences as valuable ways of knowing, we can pay better attention (i.e., be open to recognizing injustice) and be prepared for the next step: revealing injustice to others.

Reveal

In *Technical Communication After the Social Justice Turn*, we (2019) articulate the work of revealing as central to building coalitions and taking action. Simply recognizing injustices doesn't complete the work of redressing inequities, and we wanted to understand *who* our participants communicated with about injustices and *how* this reveal led to rejecting and replacing injustice.

As our participants shared, revealing injustice—especially to those who have caused it—can be an unwelcome message that can put vulnerable people at risk. And even if one reveals to people other than those causing the injustice, it can be difficult to explain, especially when one's own recognition is based on ways of knowing that are not recognized by dominant culture as legitimate, such as lived experience and "spidey sense." In this section, we share some strategies for revealing injustice, as illustrated by the stories of our participants. In analyzing the strategies used by participants to reveal injustice, we noted that one meaningful distinction is whether the reveal is planned (when one can plan ahead about how to reveal a particular injustice) versus in the moment (when one is just doing their job and—boom!—they recognize injustice that they reveal immediately). These two types of reveals suggest two different forms of intervention and strategies for coalition building.

Planned reveals

Planned reveals inhere a kind of strategizing that often involves written communication. Indeed, across our participants' stories, we noted that written forms of TPC were often central to the work of revealing injustice. For example, one participant explained that a report was released at the university level about the lack of diversity on campus. That report provided exigence for developing a diversity statement for a university working group of which the participant

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was a member. The participant wanted the university group to adopt a diversity statement that specifically and accurately reflected its support for diversity. Past experience (e.g., hiring committee discussions) had demonstrated that many of the participant's colleagues were uncomfortable talking about race. They'd talk around it, talk about everything except race, but would not mention or discuss race. So the participant felt like it might be hard to get their colleagues to talk about diversity in the context of their working group (e.g., what it had to do with them, as well as laying out their group's particular stance or position on diversity as it relates to their work).

The participant recognized that the group's unwillingness or inability to discuss racial inequities could act as a barrier to the goal of crafting and adopting a diversity statement. So the participant began by creating a class project in which students could conduct research and then collaboratively, iteratively develop a diversity statement that the participant could pitch to the working group:

So our final assignment in that technical writing class was to develop a statement that our [working group] could use and then propose that statement to the [working group]. And so what we would do is vote on the top statement, work on it together as a class, and then I would pitch it to the [working group]. And so essentially, that's what happened. We came up with a statement. We talked a little bit about what we wanted the statement to include. They [the students] did some analysis of the [working group], what we wanted, essentially, and, and yeah. I pitched the statement, after some small revisions, to the [working group]. And it was interesting. We had to have conversations about what the [group] is like, who are we. And that, I think, helped to open up some conversations about race in a way that I was hoping to see. So we have faculty that I'd never seen talk about race before end up saying, you know, "Well, what about this? Like, how can we—?" And so it became more like our [group] working on a document collectively.

Before the working group's meeting, the participant sent the draft statement to attendees to seed their thinking. Then the participant used handouts during the meeting to direct the focus of the conversation. As conveyed in the story above, their colleagues were actively engaged,

discussing race and other considerations of diversity more directly and specifically than the participant had ever observed.

This story demonstrates some useful roles for written text in planned reveals. Written text, such as the university-wide report documenting the lack of diversity, can provide exigence for a reveal and offer a more widely legitimized type of evidence to support the message that injustice is occurring. Additionally, this participant was able to use written text to create a productive environment for discussing uncomfortable topics. Sending out the text of the diversity statement before the meeting enabled meeting attendees to begin thinking about considerations of identity, marginalization, representation, and diversity ahead of time. In the meeting itself, the draft statement provided a focus for conversations, allowing colleagues to workshop documents, not ideas.

Another example highlighting the usefulness of written text in planned reveals is noteworthy in part because the participant first engaged in an in-the-moment reveal which they followed up in writing with a planned reveal. This participant observed a lack of diversity in a group being selected for a highly visible representational role:

Their diversity is a very specific kind of diversity. So when they're choosing people of color, they will choose younger, fair-skinned, traditionally attractive people of color as a part of their, as a part of their face of diversity and not, and not others that don't fit that.

In the moment, the participant raised concerns verbally in a meeting, pointing out that few people of color had been selected and that those selected were disproportionately young and light skinned. But the participant didn't stop with a verbal, in-the-moment reveal because they didn't believe it would be sufficient to prompt the next two R's (reject and replace):

I also tell them, "And, yeah, by the way, I went ahead and, and emailed the diversity folks in the [working group] because I think it's important that they know this too." [...] Because I know that a lot of times if I don't use all of the resources that I have at hand, nothing's going to happen. [...] Because they may not recognize or be willing to recognize what I'm saying without a little extra push.

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As described in the story above, after the meeting the participant contacted the organization's diversity group to register their concern and then, as an additional motivator to take action, followed up with the original party in writing to say they had informed the diversity group of the concern. In this story, we note additional roles for written communication in the work of revealing injustice:

- Written communication can reinforce and remind about verbal reveals, which is often necessary even when all parties are well meaning and share values.
- Written communication can be harder to ignore than verbal reveals, which makes written text especially useful when all parties don't share the same values or priorities.
- Written communication can call in relevant coalition members who can add ethos, or credibility, to the reveal and lend their expertise to the next steps of rejecting and replacing unjust practices or decisions.

In-the-moment reveals

Planning ahead for a strategic revelation of injustice can be useful, but that's not always possible. Many study participants had the experience of just doing their jobs and recognizing something unjust right in the moment that needed to be revealed immediately. Appropriate strategies for in-the-moment reveals vary according to the particular circumstance and, especially, the positionality of the stakeholders involved. But one strategy that several participants employed for in-the-moment reveals is framing the reveal within in a larger structural context. Framing an in-the-moment reveal structurally offers several benefits. For example, structural framing shifts the focus of the reveal from an individual to social structures, which can reduce defensiveness and support recognition. Framing in-the-moment reveals structurally also offers an alternative way of recognizing injustice that's not based solely on intentions of the perpetrator. Especially if people feel defensive, they may respond to a reveal by defending their own intentions (e.g., "I didn't mean to be ableist!") rather than reflecting on the effects of their words or behavior. And, finally, framing in-the-moment reveals structurally equips for *future* recognition of injustice; it contextualizes the specific instance of injustice in ways that can help the person recognize not just this particular instance but to begin accumulating expertise

based on lived experience to be better able to recognize future injustices.

Illustrating how one might frame a reveal structurally is a story from one participant about their experience of serving on a hiring committee. The hiring committee was composed of trusted colleagues, all of whom were explicitly committed to broadening the representation of their faculty to include more members of underrepresented groups. They shared a goal that was justice related, as well as long-standing positive relationships. It was a best-case scenario. And yet, even in this context, the participant observed that one of the candidates who wasn't the best fit for the programmatic needs laid out in the job ad was getting a lot of positive attention in the committee discussions. So the participant spoke up to caution the group:

And I said, "I just want to caution us against getting too hyped about a white guy with cool tech." And one of my colleagues on the committee took offense to that and said, "Well, you can't say that. You couldn't say that about, you know, what if you'd said that about a Black candidate?" And I was like, "No, no, no. Because implicit bias works both ways. Right? It's not just bias *against*; it's bias *for*."

The participant went on to explain that because implicit bias tends to make people predisposed towards those who are the most like ourselves, the committee, which was composed solely of white faculty members, needed to be especially careful in guarding against implicit bias *toward* certain candidates as well as implicit bias *against* others. The initial exchange led to multiple follow-up conversations: an extensive discussion in the next hiring committee meeting as well as private discussions outside of the committee. Not only did the committee go on to hire an outstanding MMU scholar, but also the previously offended colleague came to acknowledge the value of guarding against implicit bias:

He and I talked about it after the fact and he said, "When you put it that way, right, like, that's great. I just, I really reacted badly to the way that you phrased, you know, like, 'the white guy with cool tech.'" And then he was like, "And also I mean, to be fair, out of our entire candidate pool, that was the candidate who looked most like me, [...] so maybe there's some bias towards replicating ourselves."

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This story not only illustrates the potential effectiveness of framing in-the-moment reveals in a broader structural context but also demonstrates that reveals often need to be repeated and followed up. Such follow-up conversations provide time for people to reflect upon what happened and shift their focus away from themselves (e.g., their own intentions) and instead to center marginalized perspectives (e.g., possible effects or outcomes).

This example also illustrates that even when one is working in coalition, has good relationships with the people involved, and when everyone is working toward an agreed-upon, justice-related goal, a reveal still might become necessary. And that reveal may not seem to be effective, initially. At first, the participant didn't think it necessary to frame the reveal in a structural context:

Everybody in the room was aware of the fact and on board with the idea that we need to pay some very explicit attention to diversity among our faculty, and recruitment is the place to start. Like, like, I knew that this was a receptive audience to all of those things. So it [my tone] was mostly joking. In terms of the phrasing, writing out the content, I didn't think that I would need to spell it all out. Right? That what I was saying was a caution about a type of implicit bias that we might not be looking for.

But such structural framing *was* necessary—it provided a context to recognize and interpret the dynamic of the conversations the hiring committee was having and the decisions those conversations would lead to.

Another story similarly illustrates the effectiveness of structurally framing an in-the-moment reveal. This participant was leading a class discussion when a student used a problematic term without recognizing it as racist and classist. The participant explained to us that they felt comfortable pausing the lesson-focused discussion to have an extended discussion historicizing the term and opening a dialogue with the class to reveal the term as dehumanizing. In describing their reveal, the participant explained that their approach sought to frame the reveal around the language, not a person:

Nobody likes to be called a racist. Right? And I, what I've also realized is that like, I'm also like, white people in particular do not like to be called racist, and calling people racist, I think, what it does is it, unfortunately, it shuts them down. And it prevents them from thinking critically. [...] So

they're not really focusing on the situation. So the thing that I've always done and I've always thought to be helpful is to sort of focus on the activity and not the person. [...] Because I think what's really important is that in people's minds, when they think about racism, classism, or any particular, like, issue of that kind, it's always about intent, right? It's easier to sort of recognize racism, if it's intent, right? The KKK is intentionally being racist. But if you sort of take intent away, you need to focus on the activity. Then I think what people can, can think about is like, "Oh, where does this come from? [...] I'm practicing something that was given to me." And let's sort of, like, unpack this and think about the larger effects of doing this.

This participant wanted the student, and the class at large, to be able to think critically about not only the particular term but also its broader social and historical context, to recognize the way that we tend to accept our social world with its oppressive structures, including linguistic structures, which can make it difficult recognize injustice without critical reflection. To reveal that message effectively, the participant used structural framing targeted to language and action.

CONCLUSION

Our research study solicited stories of lived experiences of redressing injustices in order to hone the usefulness of the 4Rs heuristic. Participant stories sharpened our understanding of the first two R's, recognize and reveal, and these stories can lay a foundation for others to work from the heuristic. As these stories demonstrate, no situation wherein we attempt to address or redress inequity has a perfectly precharted path. And although heuristics allow us to think through situations, the thinking, planning, and strategies needed to employ a heuristic for justice requires critical imagination, which Royster and Kirsch (2012) define as "an inquiring tool, a mechanism for seeing the noticed and the unnoticed, rethinking what is there and not there, and speculating about what could be there instead" (p. 20). Pairing stories with heuristics provide opportunities to expand beyond what the individual user of the heuristic might, themselves, imagine. Our data suggests that stories are important touchpoints for a Black Feminist framework to understanding inequities, and we offer these stories to invite and stimulate the critical imagination

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necessary for redressing inequities, forming coalitions, and building a more just future.

Our study thus has implications not only for TPC practitioners and scholars doing the work of social justice and developing expertise in intervening against unjust practices in their workplaces and beyond. When engaging with any heuristic (not just the four Rs) that seeks justice—here, we think about Simmons’ (2007) heuristic for creating more equitable and just public participation—stories can provide a foundation for working within particular contexts. In other words, lived experience matters. Further, heuristics being used towards justice require both an ethic of care and personal accountability. These ethics can be enacted by honoring lived experiences and by working in dialogue. For academics, this is particularly important: If we are to do theory in dialogue with others and in relationship with others, we cannot cozy ourselves up to our own ideas, to our solitary desks and abstract thoughts. Instead, we must engage with care, because our ideas are connected to people and their lives, which means our words and theories have the potential to do violence.

Our study also has methodological implications: it shows how useful and appropriate narrative inquiry is for the study of social justice. As our stories demonstrate, the commonplaces of narrative inquiry provide insight for how narrative inquiry works alongside (not in tension with) heuristics. More specifically, narrative inquiry commonplaces (e.g., sociality, temporality, and place [Clandinin & Connelly, 2000]) are evident in the ways that participants situated their stories about their experiences with injustice. For example, many of our participants talked about specific spaces and places (geographic and symbolic) in which they encountered injustice. Their stories about injustice in some ways are tied to the spaces and places in which they did the work of recognizing injustice or revealing injustice. We see this, for example, when participants describe being in the classroom, being in a meeting, or being in a particular geographic region. The commonplace of temporality is perhaps the most visible in our participants’ stories about accumulating the ability to recognize injustice over time—both within and across events. In the case of MMU folks, temporality may function more subtly because oppression is, as one participant described, “the shit one swims in.” In other words, many MMU folks accumulate the ability to recognize oppression

because unabating experiences of oppression over the course of their lifetime confer this expertise. Finally, the sociality commonplace is also readily apparent in the way participants shared their stories. As a methodology and as an approach, narrative inquiry focuses on lived experience (Clandinin & Connelly, 2000), and people lead “storied lives” (p. 40). So, the sociality of our experiences is inherent in the stories we tell, share, and co-construct. Further, because “people shape their daily lives by stories of who they and others are and they interpret their past in terms of these stories,” stories are indeed a valid way of understanding living, being, and existing in the world (p. 40). We know from Black Feminist Theory that lived experience confers valuable knowledge. Built upon the foundation of Black Feminist epistemology, our research indicates that the ability to recognize injustice accumulates based on storied, lived experiences. This finding pushes back against “objective” or “provable” definitions of “evidence” as the only valid foundations of expertise.

In addition to offering methodological implications, this study also illustrates how Black Feminist Theory, and its epistemological tenets, can illuminate the work of TPC practitioners and scholars, particularly (though not exclusively) as we work towards social justice and inclusion in our practices. Yet much more potential for marrying Black Feminism and TPC exists, and future explorations are needed to fully engage TPC and Black Feminism. Individually and coalitionally, our future research will be dedicated to the amplification of Black Feminisms, Black Feminists, and other theoretical and methodological approaches that remain at the margins of the field. This dedication enacts Mckoy’s (2019) framework for amplification rhetorics, introduced in her award-winning dissertation:

AR [amplification rhetorics] are characterized by three tenets: (1) the reclamation of agency (ownership of embodied rhetorical practices), (2) the accentuation and acknowledgement of narratives (validated lived experiences), and (3) the inclusion of marginalized epistemologies (that add to new ways of learning). (p. 27)

In other words, by crafting a narrative inquiry study built upon the foundations of Black Feminist Theory, we engage in amplification rhetorics that contribute to the TPC field by centering marginalized perspectives.

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We close by acknowledging the limits of this article and the research study on which it reports in moving the needle of the field: this is but one study from one critical frame. We need more studies of social justice work from different coalitions, different perspectives, and with different marginalized epistemologies in order to fully realize an inclusive and just TPC. Further, the study could be expanded by exploring the 4Rs heuristic with other populations in different areas of study, and we plan to expand our participant pool to include other disciplinary experts and practitioners.

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"Changing the Face of Technology": Storytelling as Intersectional Feminist Practice in Coding Organizations

By E. Ashley Rea

ABSTRACT

Purpose: This article shares insights from an ongoing study of activist coding organizations offering coding education programs designed to increase access, representation, and equity in technology. In particular, this research seeks to better understand storytelling practices of women working in technology.

Methods: This qualitative study deployed participant observation and semi-structured interviews with organizers, instructors, and participants. Interviews were transcribed and analyzed with a grounded theory approach.

Results: This study reveals how women programmers strategically craft a counterstory practice to resist exclusionary workplace narratives.

Conclusions: This research demonstrates how women in technology deploy counterstory to work to transform access to coding education, support women's professional development, and change workplace culture.

KEYWORDS: technology, counterstory, identity, social justice, feminism

Practitioner's Takeaway

- Technical and professional communication (TPC) contexts often are shaped by exclusionary narratives that negatively impact the professional experiences of marginalized and minoritized technical communicators.
- Counterstory as a methodology can be used to create more inclusive and ethical TPC scholarship and teaching that centers the experiences of marginalized and minoritized communicators.
- Counterstory as a practice (whether written, spoken, or coded) has the potential to facilitate culture change in TPC workplaces.

INTRODUCTION

In 2021, women comprised only 25% of the computing workforce (Bureau of Labor Statistics). While emerging networked information technologies are often discussed as empowering and liberatory, minoritized and marginalized computer programmers face overt and systemic discrimination on the basis of race, gender, and ability (Agarwal, 2020; Gurchiek, 2020; Heubl, 2019). Exclusionary narratives about who “can” code permeate tech workplaces, contributing to problems of access and representation. Even when underrepresented programmers are hired, such discriminatory narratives often lead to attrition, what is often referred to as the “leaky pipeline” effect (Amrute, 2020; Wynn & Correll, 2018). Note, for example, Google’s recent ousting of Black AI researcher Timnit Gebru following her research critiquing systemic bias on the platform (Allyn, 2020).

Problems of access, representation, and equity are not unique to technology industries, however. As Walton, Moore, and Jones (2019) argue, injustice is endemic to technical and professional communication (TPC). TPC practice and research are imbricated within larger systems of power, privilege, and positionality, a phenomenon Jones (2020) labels as “political, problematic, and patriarchal” (p. 515). While TPC practitioners and researchers have historically understood effective technical communication as neutral and objective, scholars like Haas (2012) and Williams and Pimentel (2012) reveal how technical communication is imbued with assumptions that perpetuate varying systems of privilege and oppression. For example, the prevalence of color-blind ideologies in technical communication classes works to disadvantage students of color. But as Agboka and Dorpenyo (2020) remind us, “TPC, after all, is all about solving problems.” Social justice research considers injustice as a central TPC problem to be solved, examining how communication can be used to “amplify the agency of oppressed people—those who are materially, socially, politically, and/or economically under resourced” (Jones & Walton, 2018, p. 242).

Storytelling and narrative—both as an area of study and practice—are central to social justice research in technical and professional communication. Within the discipline, researchers have theorized storytelling and narrative as a methodology for

user-experience testing and software development (Acharya, 2018; Jones, 2016), analyzed racialized and oppressive narratives embedded within historical and contemporary technologies (Nakamura, 2014; Noble, 2018), and practiced storytelling as a feminist and antiracist methodology towards social justice goals (Shivers-MacNair, Gonzales, & Zhyvotovska, 2019). In particular, scholarship about women in technical and professional communication has used narrative as a means of exploring relationships between identity and practice. For example, Williams, Ammetller, Rodríguez-Ardura, and Li (2020) examine narratives of women entrepreneurs to understand complex articulations of professional identity, gender, and culture. Similarly, Petersen’s (2019) research on women TPC practitioners reveals how women leveraged social networks to rewrite workplace narratives—she provides one striking example of women adopting the derogatory label “reasonably bright girls” as the name for their informal company alumni group dedicated to professional development (p. 29). This research represents a mere fraction of the growing move to center the marginalized voices of practitioners and researchers in TPC—yet there remains much work to be done. As the social justice turn in technical and professional communication gathers momentum, it is imperative for technical communication scholars to engage ethically with the stories and practices of minoritized and marginalized communities (Agboka, 2020).

This article contributes to research on social justice and narrative in TPC by considering the storytelling practices of women working to change pervasive problems of access and representation in the technology industry. My research asks: how do activist computer programmers counter dominant discourses about women in tech? How might these practices influence their professional development? This study elucidates how narratives of “coder identity” function as gatekeeping mechanisms and offers insight into how activist programmers use storytelling as a means of coalition-building and resistance. I begin by explaining the project’s methods and its intersectional feminist theoretical framework—an essential framework to help avoid essentialisms and erasures that can accompany research on women in tech. Then, I contextualize the workplaces and professional settings of research participants and offer an analysis of their storytelling practice. In particular, I argue that activist programmers

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craft a counterstory practice (Martinez, 2020) to work towards greater equity in their professional communities. I conclude by discussing implications of the project and avenues for future research.

METHODS AND METHODOLOGY

This research comes out of an ongoing IRB-approved study of sites of coding literacy education designed by and for marginalized communities. I categorized sites of coding education as: online-only educational platforms, hybrid online and in-person meetups, structured workshops and bootcamps, and traditional university courses and micro-credentialing programs. For each kind of coding education, I selected two or three case studies for participant-observation, collection of print and digital materials, and semi-structured interviews with organizers, instructors, and participants. I initially recruited coding organizations for participants marginalized on the basis of gender and/or race located in the U.S. Northeast to facilitate travel to the in-person workshops, bootcamps, and meetups. Following the COVID-19 pandemic, I opened up the study to include virtual events hosted by coding organizations across the United States and Canada. Once I obtained permission to participate and observe from event organizers, I recruited organization leaders, instructors, and participants through each organization's Slack channel.

My focus on coding education for underrepresented communities shaped my recruitment practices. Of the 16 interviews conducted at the time of writing, 13 participants identified as women, with three identifying as East or South Asian, one as Black, one as Hispanic, five as white, and one as white and Hispanic. Two women did not disclose their race or ethnicity. The three male participants identified as Black, Latino, and white. The over-representation of white and Asian-identifying women slightly echoes larger industry demographics—of the 25% of American tech workers who are women, 14% identify as white, 5% as Asian, 3% as Black, and 1% as Latina. While some participant observations occurred in-person, all interviews were conducted over video calls. All participants are referred to using pseudonyms.

I recorded and transcribed the interviews and used grounded theory (Urquhart, 2013; Saldaña, 2016) to analyze the transcripts. For the first coding cycle, I

used in vivo coding to center participants' experiences in their own words. I organized the in vivo codes into related clusters and drafted analytic memos to reflect on my field notes and the in vivo codes in the interview transcripts. Examples of in vivo codes included, "inclusive, open, and culturally sensitive pedagogy," "community," and "empowerment." For the second coding cycle, I used axial coding to categorize codes and draw out the relationships between them. For the final coding cycle, I used theoretical coding to better understand and identify participants' storytelling practices in each site of coding education (see Table 1).

My research is grounded in an intersectional feminist theoretical framework (Crenshaw, 1989; Walton, Moore, & Jones, 2019). Crenshaw (1989) theorized intersectionality as a means to understand how interlocking systems of oppression affect marginalized individuals in a variety of ways dependent on their positionality. An intersectional approach is especially vital for research on feminist technology interventions, which all too often center the voices and experiences of privileged white women. For example, Scott and Garcia (2016) found that girls of color were often left out of feminist coding interventions. Drawing on Jones' (2020) decolonial narrative inquiry, what she explains as "concurrently a methodology, perspective, and practice," I highlight the importance of narrative and lived experience in TPC research (p. 520). Walton, Moore, and Jones (2019) argue for the necessity of centering and valuing marginalized perspectives in order to transform institutional and organizational contexts of technical and professional communication. Following their call, this research shares stories of minoritized and marginalized women's experiences as they work to transform the tech industry.

Chávez and Griffin (2012) argue that intersectional research challenges "who has the power to name, whose discourses can be heard, whose ways of knowing are valid, and whose approach to communication can be valued" (p. 20). Intersectional feminist work demands reflexivity on the part of the researcher, especially when engaging with communities outside one's own. For this research, I toggled between insider/emic and outsider/etic perspectives (Moss, 1992). As a consultant at two university digital studios, I had shared experiences with the academic technologists, software engineers, and front-end developers I talked with. But as a white woman working with communities often led by women

Table 1. Thematic Codes and Definitions

Code	Description	Samples from Interviews Corresponding to Label
Identity Gatekeeping	Participants described barriers to entry into the profession and experiences of discrimination connected to a particular narrative of coding identity.	"So that [white, male] identity wrapped up in being a coder has really been detrimental to ... women and especially women of color entering into the tech space because they do not identify with that coder ... someone behind the computer in the dark." (Olivia)
Educational Access	Participants described their efforts to increase access to coding literacy education and the tech industry.	"[In the coding workshop for women of color] we're focusing mostly on frontend Web development workshops where the goal is if you complete the four courses (the intro to HTML and advanced HTML, Intro to JavaScript, and advanced JavaScript) ... you have a robust portfolio basically an online website of who you are, your resumé, your portfolio projects that you've worked on. So you had something to give to an employer because the overall goal is to get a job or to get a promotion." (Olivia)
Professional Development	Participants described how they created opportunities to claim and demonstrate their rhetorical and technical expertise to progress in their careers.	"I was helping to run [a tech conference]. And one [challenge] that I know that the organizers of last year was getting any women to submit. What I did not want was a conference lineup that gender diverse, but all the women were talking about soft topics ... I think that events like [the coding workshop for underrepresented programmers] [are] a powerful signal that we're willing to put money and effort in running the community and grow the pipeline." (Sophie)
Institutional Change	Participants described how they worked to change the culture of their workplaces.	"What as line level engineer can I do to help change the culture?" (Drew)

of color, I wanted to adopt a reflexive stance and practice reciprocity with the communities I worked with (Moore, 2017). To that end, I became an active participant in the gender-inclusive coding meetups and workshops, learning from other participants and leaders and contributing my stories and academic resources when appropriate. In this article, I also quote from participant interview transcripts to share their stories in their own words and follow a practice of member-checking.

In what follows, I describe the workplace contexts and narrative practices of women working in tech. Each participant shared an acute awareness of the dominant narratives shaping their workplace contexts. I offer an analysis of the exclusionary narratives that connect performances of coding identity to practices of gatekeeping. Next, I posit that the activist coding organization leaders and participants at the heart of this research practice storytelling in their DEI (diversity,

equity, and inclusion) work. Specifically, I argue that the activist developers craft counterstories and narratives of resistance to create change in three related areas: tech industry educational access, personal professional development, and institutional and industry culture.

ANALYSIS

While my ongoing study features interviews with 16 participants, for this research, I focus on the stories of five women in particular: Olivia, Sophie, Drew, Katherine, and Neha. Taken together, these participants reveal how marginalized and minoritized developers can resist prevailing discriminatory workplace contexts and work to transform their industries through their counterstory practices. Olivia is an academic technologist and the founder of an organization offering coding education and professional development for women of color. Sophie, a senior software engineer

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at a major tech company, has years of experience as an organizer for DEI programs and currently leads a workshop for underrepresented developers in Go, an object-oriented programming language. Drew, a quality assurance automation engineer, led and participated in a national organization for technologists with marginalized genders. Katherine and Neha, both software engineers, are participants in different chapters of the same national organization. Olivia, Sophie, Drew, Katherine, and Neha each described how their professional experiences were influenced by prevailing narratives of who could be considered “technical.” In what follows, I share their experiences with identity-based gatekeeping to establish the context for their counterstory practices.

Coding Identity and Gatekeeping Narratives

Narratives about who can code are closely tied to perceptions and performances of identity. Alfrey and Winddance Twine (2017) theorize the phenomenon as a “gendered spectrum of belonging” that results in differing experiences for women based on their race, ethnicity, orientation, and gender expression (p. 30). Prevailing tech culture privileges masculine identities, especially for white and Asian programmers. Tech culture emphasizes the importance of occupying a coder identity, one often synonymous with a racialized masculine “geek” ideal “measured by one’s technical skills, but also by specific personality traits, styles of dress, interests, forms of cultural knowledge, and gender presentation” (Alfrey & Winddance Twine, 2017, p. 35). In order to occupy the coder identity, programmers need to demonstrate a myopic interest in technology above all else. Olivia, Sophie, Drew, Katherine, and Neha experienced how racialized and gendered coder identity narratives effectively functioned as a gatekeeping mechanism. When women, especially women of color, enter tech industry spaces, they are often automatically assumed to be less senior or less technical than their male colleagues. Compounding the effects of such discriminatory narratives, programmers who viewed coding as a practice rather than an identity to be taken up often faced professional penalties.

For some participants, the demographics of their industry and workplace discrimination contributed to their reluctance to claim coding as an identity. Reflecting on a StackOverflow survey that found 95% of Go developers identified as white and male, Sophie

shared that she didn’t identify as a Go developer, despite her experience and senior engineer position at a major tech company. Beginning her analysis of identity and coding by first acknowledging her own positionality and relative privilege as a “North American-born, English-speaking, cisgender East Asian woman,” Sophie describes the tightrope she and others have to walk in order to prove their technical ability. Without their constant vigilance and rhetorical work to shape their professional persona, underrepresented programmers can quickly be left out in established systems for retention and promotion. Sophie explained this “dehumanizing” phenomenon further:

Identity is such a complicated thing in tech. And I think a lot of us, myself included, haven’t done the hard work to think about all the ways that we make quick snap judgments about people based on some perceived identity. Existing as a woman in tech means that you always have to be hyper aware of how you’re being branded at all times. People tend to round you down to the least technical thing you’ve done recently. For example, if you work on a team of all engineers, you are an engineer by job title regardless of what level you are. If you organize a team dinner and everyone has fun at the team dinner, then the feedback you’re going to get at the end of that quarter is, “Oh, everyone thinks she’s so good at organizing team dinners.” But guess what your male colleagues are getting? Your male colleagues are getting: “Oh, John is such a great technical contributor.” And guess who gets promoted?

Sophie expressed frustration with prevailing industry narratives that viewed women developers as less technical. For Sophie, the lack of representation in her programming language, Go, and her resistance to exclusionary narratives contributed to her motivations for her DEI leadership work. Maalson and Perng (2016) argue that occupying the coder subject position is complicated, with a multiplicity of factors influencing how individuals perceive themselves, explaining that some factors “are more closely related to coding, including confidence, competence and experience,” while “others depend upon how individuals recognize the relationships between code, work and identity” (p. 6). Sophie, Katherine, and Neha each reflected on how exclusionary narratives of coding identity (and

outright identity-based discrimination) influenced their professional experiences.

Katherine, a backend developer in the Midwest, also viewed the coding identity as a practice of gatekeeping and experienced consequences from not taking on a coding identity firsthand. Katherine contrasted her understanding of something she did as a means to achieve a certain lifestyle (in particular, the work-life balance she lacked in her previous career as an academic) with her developer husband's view of coding as tied to his identity. She described:

It wasn't quite impostor syndrome, but I just felt like I'm not a very good software engineer, because I feel like I lack ambition or drive or something because of my boundaries. There are people, and my husband's one of them, [who] are always reading tech blogs on evenings or on the weekend, or someone will just come to work on Monday and [say] I fixed [the system] over the weekend. Please review my code. That's not me . . . It's not who I am. It's what I do. If I'm being perfectly honest, it is what I do so that I can provide security for my kid. I feel like a mother is like the biggest part of my identity. It was really hard to say that out loud. I even thought, if I don't feel like such a passion for my job that I'm just going to do it on the weekends, maybe this isn't the right career. [When I told] my manager, [he said] we need all types of people to make a team work. He was the first person that made me realize it's okay to be that way, and it's okay that writing code is not really something that I see as part of my identity.

Even though Katherine found acceptance from her manager and continued to strictly enforce boundaries between her time at work and her time with her child, she experienced a system that ultimately penalized her for creating those boundaries. She continued, "It's hard because you don't want to punish people for having boundaries. But if someone does just do a bunch of work on the weekends, you want to reward that, because they're working very hard. Sometimes the lack of a reward can feel like a punishment." Ultimately, the privileging of programmers who center their identity on coding can lead to unequal career trajectories. Disheartened, Katherine described how her coworkers who worked around the clock were perceived as "better," wondering, "Maybe I'll just

never get promoted . . . I feel like I'm mediocre, and I'm okay being mediocre." Katherine's experience is borne out in numerous studies that show how mothers, among others, face both individual and structural discrimination in the workplaces, what is commonly referred to as the "motherhood penalty" (Correll, Benard, & Paik, 2007). Resistance (or even resignation as in Katherine's case) to taking on coding identity comes at a professional price.

Neha, an experienced developer in the Pacific Northwest, expanded on this reframing of exclusionary coding identity narratives, and connected it to educational programs (e.g., bootcamps) designed to increase access to the industry. For Neha, coding was a practice she did, not who she was. Coding allowed her to "solve problems," but tech didn't occupy the most central position in her identity formation. Neha expressed dissatisfaction with the prevailing culture that rewarded those who held coding as a key component of their identity. Neha described the contemporary movement to make tech more welcoming for people with nontraditional computer science backgrounds, framing coding as "building software" and "a skill that you can learn." However, this framing of coding as a skill rather than a closely-held identity was perceived as devaluing coding as a profession. Neha observed, "What I have noticed is in the people who tend to tie this to their identity, [the move to view coding as a skill] feels hard for them to accept that. They always tend to get sucked into this thing of . . . nontraditional people can't be as good." For Neha, those narratives of coding as an identity feel "elitist" and come "from this place of, 'Oh, wait, wait. This is my identity that I've cultivated over years and years. So how could you treat it as a skill?'" It is not a coincidence that the attitudes Neha described coincide with the increased number of bootcamp grads entering the field, new programmers who are more likely to be women and people of color.

Of the participants on whose stories this article is centered, only one programmer actively took up coding as an identity. Drew, a quality assurance engineer for a large job listing platform, immediately connected coding to part of her identity as a motivated and driven individual. She described:

I take a lot of pride in my work, and so I derive a lot of joy and self-worth out of the work that I deliver. In addition to coding, I do elite level triathlons. A lot of my identity is wrapped up in

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that as well. It matters to me, because it's something that I'm measurably good at, and I can demonstrate that.

For Drew, actively occupying a coding identity closely tied into her sense of self. Drew also experienced the negative impacts of exclusionary narratives—her experience in tech was rife with both microaggressions from coworkers and managers, from being called “too emotional” in performance reviews to having to constantly work to assert her technical expertise. These challenges contributed to Drew deciding to go by a gender-neutral version of her first name.

Alfrey and Winddance Twine (2017) found that gender-fluid women from higher-status racial groups—white and Asian—were able to assimilate into masculine tech culture in a way that their heterosexual, femme-presenting and/or Black or Brown women colleagues could not. While my research does not explicitly consider orientation and gender presentation, Drew’s experience as a white woman and her gender-neutral renaming practice might have helped her occupy a coding identity more easily. However, like Sophie, Drew also used her coding identity as motivation for her DEI work. She described, “What I work on is important to me. Last quarter I worked on accessibility efforts at the company, which was hugely important, because it’s the right thing to do.” Drew connected her professional work in accessibility to her personal experience with triathlons, sharing, “I’ve done some guiding on triathlons, guiding for blind athletes. It is one of those things where once you experience someone else’s world, you start having a full appreciation for it.” Despite exclusionary narratives that used coding identity as a means of gatekeeping, Olivia, Sophie, Drew, Neha, and Katherine all worked to make their industries more equitable. The following section details how they crafted counterstories to transform access to coding education, their own professional development, and their workplace contexts.

Constructing Counterstories and Narrative Resistance

Jones (2020) urges researchers across composition studies and technical communication to build coalitions for learning oriented around their goals for more socially just classrooms and communities. For Jones, this work is vital “if both fields intend to pursue a more just and ethical approach to teaching, learning, and

engaging with texts and technologies,” a process she describes as beginning to address Royster and Kirsch’s (2013) call to re-story master narratives in the discipline (2020, p. 517). It is in this spirit that I introduce Martinez’s (2020) pivotal work on counterstory as a means to better understand storytelling practices of activist computer programmers at the center of this article. Drawing on critical race theory, Martinez (2020) theorizes counterstory as methods that “empower the minoritized through the formation of stories that disrupt the erasures embedded in standardized majoritarian methodologies” (p. 3).

Counterstory encompasses a range of genres, including narrated dialogue, allegory, biography, and autobiographic reflection. One genre Martinez (2020) uses to great effect is the composite counterstory, which blends empirical data, existing research literature, judicial records, and the author’s experiences in order to illuminate theoretical concepts and humanize data. Counterstories are not simply the narrativization of marginalized subjectivities—though Martinez (2020) labels that a good place to begin—instead, counterstories require reflection and critique of one’s privilege and the use of such privilege towards social justice ends. Martinez (2020) explains the difference between storytelling and counterstory, writing, “while there are many stories, and while many data are narrativized, counterstory is distinguished from other forms of storytelling by its transparent commitment to a ‘liberatory and transformative approach to racial, gender, and class oppression’” (Matsuda as cited in Martinez, 2020, p. 17). As a method, counterstory shares similar aims with antenarrative, “a polyvocal, dynamic, fragmented, yet interconnected” practice which Jones, Moore, and Walton (2016) deploy to “destabilize and unravel aspects of the tightly woven dominant narrative” about TPC as a field to chart a path to a more inclusive future (p. 212). While both antenarrative and counterstory have implications for revisionist historiography, for my study of women programmers, counterstory holds more salience because of its orientation to the future and emphasis on accessibility to non-academic audiences. Martinez (2020) argues that accessibility is key to the practice of counterstory, so that the work is legible to community members and stakeholders.

In the face of overt and systemic discrimination, the women I spoke with crafted counterstories to resist

exclusionary industry narratives. Olivia, an academic technologist and founder of a tech organization for women of color, put it best: “I’m literally trying to change the face of technology. Women of color are in this space and we’re not going anywhere.” Olivia, Sophie, Drew, Neha, and Katherine led or participated in meetups and workshops designed for underrepresented communities in tech. These meetups and workshops offer educational content and professional development opportunities, from learning coding languages to practicing technical interviews, and function as a space for networking and community-building. Each organization held a mix of in-person and online events and used a Slack channel or Facebook group for members to communicate between events. The women featured in this research are not necessarily writing counterstories for academic audiences using the genres of allegory or narrated dialogue (though writing is a surprisingly frequent topic in coding organization events), yet I contend that they are crafting a kind of counterstory through their oral storytelling, organizing, and coding.

Martinez (2020) emphasizes that counterstory must both illuminate and challenge existing systems of discrimination and move towards a transformative resistance predicated on a belief in social change (pp. 28-29). Counterstory in Martinez’s (2020) framing must include tenets of critical race theory (CRT), which she lists as: “(1) permanence of race and racism; (2) challenge to dominant ideologies; (3) interest convergence; (4) race as social construct; (5) intersectionality and antiessentialism; (6) interdisciplinarity; (7) centrality of experiential knowledge and/or voices of color; and (8) commitment to social justice” (p. 9). Using this framework in what follows, I analyze how Olivia, Sophie, Drew, Neha, and Katherine each create counterstories that highlight existing inequities and work to enact social change on three levels: access to coding education, individual professional development, and institutions and workplaces.

Coding education access

Olivia emphasized the importance of countering exclusionary narratives through her work as an academic technologist and leader of a tech organization for women of color. Olivia first entered the Philadelphia tech community when she decided to transition away

from her work as a theater audio engineer. Dismayed by the lack of Black representation, she wondered, “When I go to a tech coding workshop, why am I the only Black person? This city is filled with Black people. Where are they?” In response, Olivia created her own organization to offer coding education for women of color focused both on the “hard” technical skills as well as “soft” skills for professional development. She explains her workshop’s purpose, arguing:

I’m teaching women how to code. But it’s bigger than that. What I’m really teaching them how to do is how to unlearn what they’ve been taught. A lot of women of color, or women in general, have not been taught that science, math, coding, you name it, is for them. But that means you have to unlearn all the societal things that you’ve been taught about what women can do. And who you see at the front of the table. So you’re unlearning a thing, and you’re learning a new skill.

Olivia drew on her background in learning development to describe her teaching and organizing practices. Her workshops operated as a counterstory by focusing on representation and community-building to encourage women of color to view themselves as technical. Viewed as a counterstory, Olivia’s workshop attended to CRT tenets including the permanence of race and racism, challenge to dominant ideologies, intersectionality and anti-essentialism, centrality of experiential knowledge, and commitment to social justice. Olivia designed her workshops to center women of color as the experts, countering dominant ideologies that held programming as a solely white and masculine occupation. Olivia explained, “I am intentional about having women of color be the leaders, so people can see themselves being in front of the class as well.” This representation continued to the content created in the workshop itself. Many workshops ask participants to use filler content like cat photos to show how to resize images and play with format. But for her organization, Olivia had a different focus, sharing:

But what I want people to see, what I want these women of color to see, is themselves. I want you to highlight yourself or someone that looks like you. We’re going to get [stock] pictures of women of color there and say, hey, use these pictures as a filler for your content.

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She explained the importance of representation for women to take on coding identity, arguing, “If you don’t see yourself in that role, how can you get there? That identity piece rolls back into representation. You have to see it to believe it, to believe that it even is a possibility for you.”

Public conversation in tech has shifted, with many in the industry acknowledging problems of representation. The shift in framing of equity in tech is not without pushback of course—note James Damore’s incendiary 2017 memo bemoaning the lack of ideological diversity at Google. Maalsen and Perng (2016) found that while gender-inclusive coding meetups sought to create “inclusive computing cultures,” their “work encounters resistance of the broader computing community which view female friendly events as exclusive or divisive and hindered by perceptions and remits that narrow down the scope of diversity” (p. 6). Shivers-MacNair and San Diego (2017) emphasize the necessity of representation, what they label a “show, not tell” approach to localizing and supporting inclusivity. Of course, representation alone is insufficient for changing exclusionary industry narratives, but it serves as a vital first step.

Olivia’s workshop functions as a counterstory as it centers representation and community. Martinez (2020) argues that counterstories cultivate community through representation of minoritized voices, explaining, “counterstories build community among those who have been marginalized . . . counterstories nurture community cultural wealth, memory, and resistance” (p. 114). Olivia argued that the community and network facilitated by groups like hers was one of the most important aspects of developing a career in tech. Olivia described how this setup engendered “peer to peer relational activity” and learning, and explains this significance for her workshop’s participants:

In the Black community, community is really important. I want you to learn who’s in this room. I want you to get to know them, because you two, if you spark or kick it off with someone you know, have a great conversation, you might want to say, hey, let’s meet up later at the coffee shop and let’s finish our portfolios.

In order to create community, these coding workshops all had participants sit in small groups accompanied by teaching assistants. She described how such

arrangements facilitated “peer-to-peer” learning, asking, “What if you have a spark of creativity and the person across the table is working on something where they may need someone who has your expertise?” Olivia and other coding organization leaders also facilitated this community through team-building activities and providing meals and opportunities to connect socially. Communities like those fostered by these case studies helped participants’ learning and also worked to increase participant’s “credibility” in industry settings. As a counterstory, gender-inclusive workshops function to legitimize participants’ technical knowledge.

As participants in a similar organization for technologists with marginalized genders, Neha and Katherine explained the benefit of finding representation and community. Neha described:

As a woman working in tech, I am used to being in rooms that are mostly men. So just being in a space where that is reversed is conducive to my desire and encouragement to keep doing what I’m doing because it’s a sign of, hey, I belong. Look, here are my people.

Neha and Katherine shared how belonging was especially meaningful when confronting microaggressions in their workplaces—sharing their experiences validated them. Neha describes how the community and learning experiences she’s had in coding meetups influenced her response to microaggressions and workplace challenges, saying:

I think there is definitely some subconscious aspect of “I’m not the only one. This is happening. We know this is a thing among underrepresented people.” Being able to see the truth of that influences how I respond to it. For example, I might second guess myself a little less about, “Hey, I just witnessed something that was not entirely acceptable.” I might not brush it off entirely. I might know that it’s not that I’m not competent. It’s just something else that I’m running into. [It helps me] be more mindful of [the fact that] there is a structure and system here.

Neha’s conversations with her fellow community-members operate as a counterstory that illuminates structures and systems of oppression and offers members support. Maalson and Perng (2016) conclude that as participants engage with activist coding

organizations over time, they gain not only technical skills but also an identity as programmers, one “that many initially felt unworthy to inhabit.” They align this identity shift with a larger cultural shift, where “female coding subjectivities become inseparable from how they perform hybrid sociospatial relationships around coding” (Maalsen & Perng, 2016, p. 11). Olivia, Katherine, and Neha’s counterstories and community-building contribute to the identity shift described by Maalson and Perng. Activist coding organizations challenge these exclusionary narratives by considering coding education access as embedded within ongoing power structures that privilege a particular performance of coding identity. Furthermore, these organizations encourage participants to own their identity, lived experience, and technical expertise and intentionally rewrite narratives about who can code.

Professional development

After building community and facilitating opportunities for greater representation, leaders of activist coding organizations also modeled counterstory as a means to speak back to workplace discrimination and move forward professionally in an industry that perpetuated exclusionary narratives. In the organizations that I studied, one of the main ways that participants were encouraged to resist exclusionary narratives and claim their own coding expertise and identity was through meetup events that positioned participants as experts. Coding meetups often hosted events where members taught technical and rhetorical subjects to the community. The participant pool for gender-inclusive coding meetups was expansive, encompassing a wide variety of positions in the tech industry and related fields, as well as a range of experiences and participant positionalities. The underlying assumption of meetup organizers was that all participants could contribute their unique skills and experiences. At one meetup I attended, a participant taught principles of universal design for front-end web development, while at another, a participant shared her own experience breaking into the tech industry without a university degree. Organizers frequently invited participants to contribute and offer talks on their areas of interest, ranging from events on combating workplace microaggressions to technical topics like design patterns. In so doing, coding organizations benefited from the diverse experiences of its members,

and participants gained experience presenting their work as experts—a vital practice given the propensity for women in tech to be viewed as less technical and competent.

As the organizer for a coding workshop for underrepresented programmers, Sophie used her own experiences to create a counterstory that encouraged other participants to use their rhetorical expertise to combat discriminatory narratives about their technical expertise. Sophie explained the effects of this practice further:

One thing that I learned about being in an organizational role or wearing the captain’s hat at tech events is that people estimate your Go level to be a lot higher than it actually is. By people, I mostly mean men, people who are coming from a more senior angle relative to me, with more experience than me. What a lot of people operate by is that organizing things is hard, getting in front of other people is hard. In order to do that you must have high confidence in yourself. If you have high confidence in yourself, you must be technically capable already.

Sophie’s example reveals the conflation of confidence in one area, public speaking, with technical expertise, with the end result of countering other engrained stereotypes about positionality and tech. Sophie argued that while the conflation of rhetorical and technical expertise wasn’t “true,” the phenomenon and the network she developed through her diversity and inclusion organizing accelerated her career, continuing:

A requirement for getting up in front of people to do the managerial work is completely different than being a good engineer. But for whatever reason, a lot of people have these things conflated . . . Just having people treat me like I was capable has been such a [career] accelerator. I think it’s been personally good for me, but it also makes me sad that that their assumption [is not applied for all women]. Before I started organizing, I started going to events and a lot of people would mistake me for being a recruiter or an intern or junior engineer when I was a couple of years into my career already. So that sucked. I think the more interactions you have with that, the more likely you are to develop things like imposter syndrome and doubt if you belong and if you’re capable.

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Sophie's example highlights the ways in which exclusionary narratives can function to drive marginalized and minoritized programmers out of the field. Instead, by pursuing leadership roles in her DEI work, Sophie was able to craft a counterstory practice that made inequity in tech more visible. Sophie used her knowledge of the conflation of rhetorical and technical expertise to encourage other marginalized programmers to participate in DEI organizations and share their stories and expertise at technology conferences. In her counterstory practice, Sophie described how she worked to increase access and center representation, explaining, "I like creating a pipeline of people who are interested in the Go language so that eventually [they] get to the point of being able to present as public thought leaders or role models [in order to] kick off a positive feedback loop." As leaders in coding organizations, Sophie and Olivia crafted counterstories that encouraged other participants to claim and demonstrate their rhetorical and technical expertise.

Rewriting institutions and workplaces

While each participant described how discriminatory narratives perpetuated varying forms of gatekeeping, they also created counterstories to organize for collective action and culture change. Drew and Katherine, in particular, shared stories of individual and shared efforts to reshape their institutions. Fed up with language-based microaggressions and a lack of inclusive language, Drew wondered what she could do as a line engineer. She asked, "What as a line level engineer can I do to help change the culture?" and created a bot that prompted her colleagues to use gender-neutral language (e.g., "friends" or "y'all") when they typed gendered forms of group address (e.g., "dudes" or "guys"). Drew explained:

It got installed in probably 80 percent of rooms. And some people had very visceral negative reactions to it. It was trending on the internal blogs. It [had] over 200 comments. A lot of people were like, this is not a big deal. I was really frustrated because that second post [in response to her bot] [expressed], "We don't really care how you're asking us to speak to you. We just really need to promote women in leadership."

Drew continued to express her frustrations about colleagues that downplayed her own experience with discriminatory narratives, especially because at her level, she couldn't enact efforts to promote and retain more diverse programmers. Colleagues minimized her experiences with exclusionary narratives and gendered address, viewing it as a superficial issue compared to larger issues of women in tech. This perspective denies the relationship between discriminatory industry narratives, the experiences of marginalized and minoritized programmers, and hiring and promotion practices. Drew's bot can be read as a counterstory attentive to the following CRT tenets: challenge to dominant ideologies, intersectionality and anti-essentialism, centrality of experiential knowledge, and commitment to social justice. Ultimately, experiences like these led Drew to transition to a different company, one that collected data on equity in the workplace and used pay bands and other measures to begin to more meaningfully address the working conditions of marginalized programmers and provide clear pathways to promotion.

Similarly, Katherine described her own efforts to enact institutional change by advocating for a paid maternity leave at one company. She explained:

I really tried to push to be an agent of change at my company and get them to offer [maternity leave]. I tried taking the "it's the right thing to do" approach. I tried taking the "you just need to be competitive, because you are the only tech company in Chicago that doesn't offer twelve weeks [of paid leave] for the primary caretaker."

Katherine shared how she was ultimately "not successful in bringing about that change," which disappointed her because she wanted to have a "legacy with that organization," contributing to her decision to take another job. As a counterstory, Katherine's example points to the CRT tenets of interest convergence theory and commitment to social justice. In her current role, she's had some success in small efforts to change her workplace. For Katherine, these changes are "not tech-oriented" but rather "person-oriented." For one of her recent initiatives, she started providing tampons in the women's bathroom. Katherine "demonstrated the need by implementing the solution [herself]." After several months of doing this, she collaborated with the office manager to make this a company policy. Katherine is

still working towards “being an agent of change” on a larger scale. She asks:

How can I bring about change on a larger scale for something like a parental leave policy? I’m still trying to figure it out . . . I haven’t even been at this company a year, but I don’t really think that you have to have a lot of seniority or be really high up on the food chain to make change. Maybe you have to enlist the help of somebody who has a lot of clout. But people at the bottom can be agents of change, too.

Drew and Katherine share their counterstories as they work to transform their institutions. While Drew used counterstory as she coded her bot to make visible gendered language in the workplace and spark conversations about equity in the tech industry, Katherine used counterstory as she sought to improve the working conditions for other women at her workplace. Reflecting on the importance of rhetorical skill and storytelling, Katherine concluded, “If you want to be an instrument of change, you need to know how to communicate.”

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

This research yields insight into the innovative storytelling practices of marginalized and minoritized programmers. As Peterson (2019) suggests, TPC scholarship on women and work has been intermittent. In response, this project centers the experiences of women in the tech industry. Understanding these practices through the lens of counterstory sheds light on the ways in which activist programmers work to create change for women in coding education, professional development, and workplace contexts. Haas (2012) calls for “alliances between all designers and users of technologies and the discipline” in order to “rupture dominant notions about what it means to be—and who gets to be called—technical or technologically advanced” (p. 304). I posit that activist programmers and educators considered here are working to upend narratives about who can be considered technical. Olivia, Sophie, Neha, Katherine, and Drew each crafted counterstories in varying ways as they worked to transform their industry. Olivia rewrote narratives about women of color in technology as she founded an organization designed

to “change the face of technology.” Sophie shared her own story with other marginalized programmers in her DEI leadership, encouraging them to strategically use their rhetorical expertise to combat discriminatory industry narratives. Neha used counterstory to cultivate a supportive community, while Katherine deployed counterstory in her efforts to change her workplace culture. Finally, Drew coded her counterstory as she created a bot to encourage gender-neutral language in her workplace. Taken together, these examples suggest the possibilities of counterstory as a productive response to systems of inequity in tech workplaces.

Because of the small number of participants, the results of this study are specific and non-generalizable. Nor are all activist coding organizations created the same in regard to their commitment to intersectional feminist practice. For my study, I sought out coding meetup chapters with diverse leadership, active membership, and frequent event programming. While I cannot speak to the totality of each organization’s culture, my experience participating in their events and online communities suggest that these organizations prioritize the experience of multiply-marginalized participants and create a welcoming environment for participants. These selection criteria limit my ability to make claims about coding organizations more broadly.

Ultimately, my study suggests that counterstory as a methodology and object of study holds much potential for TPC practice and research. As Olivia, Sophie, Katherine, Neha, and Drew make clear, stories and storytelling matter, shaping whose voices are heard and valued within professional contexts. This research sheds light on the effects of discriminatory industry narratives and identity-based gatekeeping and demonstrates the stakes of intersectional feminist interventions. Counterstory is an important practice toward social justice goals, especially for marginalized programmers working to make the tech industry more equitable. Counterstory also holds value for TPC practitioners. In this research, I have shared how five women in technology craft counterstories in their workplace and community advocacy and coding. Their stories suggest generative possibilities for counterstory in technical communication contexts.

Counterstory also opens up possibilities for pedagogy and research. As Martinez (2020) notes, critical race theory “has always been concerned with the colonizing functions of education” and CRT

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practitioners “have always aimed to disrupt this hegemony with transformative heuristics and praxes” (p. 115). Counterstory also can be incorporated into TPC classrooms as instructors craft more inclusive, ethical pedagogies that center the stories and experiences of marginalized and minoritized communicators. For example, Shelton (2020) offers an excellent approach to centering difference, bias, and social justice in the TPC classroom. TPC researchers might craft their own counterstories using Martinez’s (2020) framework and genres to re-story dominant disciplinary narratives. Future research on counterstory and technical communication in technology could consider a wider range of coding organizations and participants to offer more generalizable conclusions. This initial study suggests a series of follow up questions that might prove generative for TPC research on the social justice turn: Where is counterstory practiced in technical communication contexts? How might counterstory be used in other TPC contexts? Finally, how might we amplify the counterstories of practitioners and researchers? Jones, Moore, and Walton (2016) call for “other ways forward, other goals, and other approaches and methodologies for social action” in order to “suggest, create, and draw together other seemingly disparate narratives to tell a different, more inclusive and more just story of what our field can and, we hope, will be” (p. 224). My research suggests that counterstory is one avenue for TPC researchers and practitioners working to create a more just and equitable discipline.

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Legitimizing Situated Knowledge in Rural Communities Through Storytelling Around Gas Pipelines and Environmental Risk

By Erin Brock Carlson and Martina Angela Caretta

ABSTRACT

Purpose: The aim of this article is to demonstrate that rural landowners and community members' place-based, situated knowledge is expertise that should be taken into account by TPC professionals involved with technological or environmental development (e.g., in the energy sector).

Method: This paper is grounded in the stories of 31 residents of rural West Virginia who share concerns about ongoing natural gas pipeline development. Through visual and place-based storytelling methods, walk-along interviews (Carpiano, 2009) and photovoice (Sullivan, 2017), a rich collection of stories and photographs that reveal the often-undocumented effects of pipeline development were gathered.

Results: The stories of residents living in close proximity to natural gas pipelines reveal two main types of knowledge circulating in conversations about energy development: knowledge rooted in more traditional forms of epistemic authority, such as legal definitions and technical accounts of land; and situated knowledge derived from lived experiences of people directly impacted by technological and environmental changes.

Conclusion: Ultimately, we argue that to embrace stories told by rural residents is to center the experiences of communities, which, in turn, legitimizes situated knowledge resulting from first-hand experience. This demonstrates that expertise can be located in spaces outside of corporate, technical, or academic knowledge, and encourages technical communicators to seek out that expertise in their own work.

KEYWORDS: Environmental Risk, Gas Pipeline Development, Appalachia, Photovoice, Storytelling

Practitioner's Takeaway

- Landowners and community members possess valuable situated knowledge of their surroundings that cannot be easily captured by technical or legal definitions of problems.
- Insights from landowners must be gathered when technological or industrial advancements bring heightened levels of environmental risk.
- Research methods based in storytelling, including visual and participatory approaches, can be a way to access place-based, situated knowledge.

INTRODUCTION

Rural communities are often overlooked because of their remote locations and small populations, even though they are often sites of industrial development that provide amenities for urban and suburban areas. For example, more than two million miles of natural gas pipelines run throughout the United States, many of which are constructed through sparsely populated areas (Office of Pipeline Safety, 2021). Rural areas in the Appalachian region have seen a boom in pipeline development in recent years with construction of the Atlantic Coast and Mountain Valley pipelines. West Virginia alone has seen a four-fold increase in natural gas production in the last decade (U.S. Energy Information Administration [EIA], 2021), making it a likely site for continued development.

West Virginia has a complex history with extractive industries, most notably, coal mining. Though coal has been largely replaced with hydraulic fracturing and natural gas pipelines, the dominance of extractive industries has remained largely unchallenged because of presumed economic necessity and a deeply rooted cultural nostalgia for coal, which are inextricably linked (Bell & York, 2010; Kurlinkus & Kurlinkus, 2018). The presence of extractive industries, however, comes with risks to places and people alike. Rural communities at the forefront of natural gas pipeline development and accompanying buildout face these risks daily; however, their concerns often go unacknowledged by industry representatives. Further, landowners are often not consulted until late in the development process (Finewood & Stroup, 2012). This results in tension between many rural residents and the natural gas industry, because residents feel like they have very little voice in plans for pipelines—a tension reminiscent of other studies of environmental policy's impact on rural communities (Simmons, 2007).

Recent work urges technical and professional communication (TPC) professionals to seek out and amplify the stories of people who have been overlooked, ignored, or even silenced (Haas & Eble, 2018; Walton, Moore, & Jones, 2019). Rural West Virginians impacted by the development of natural gas pipelines are one such group that can tell stories about how energy infrastructure can drastically change natural environments, increasing perceptions of environmental risk. While many official narratives

about natural gas pipeline development in West Virginia tend to focus on economic opportunities offered to rural communities by the industry (Willow & Wylie, 2014), the everyday realities of living in the shadow of industrial development often go unconsidered. Natural gas pipelines constructed in close proximity to rural communities heighten levels of perceived environmental risk, as landowners in this study reported fears of explosions, water and ground contamination, and air pollution; however, they also reported that their fears were rarely attended to. As Simmons (2007) points out, models of risk assessment and management are often “arhetorical—typically decontextualizing risks [and] failing to consider the knowledge local citizens can contribute” (p. 1); as a result, residents’ first-hand knowledge of their land is often not viewed as valuable information, even though they arguably know the landscapes surrounding their home better than anyone else.

This article argues that rural residents’ situated, place-based knowledge is expertise—expertise that should be valued by decision-makers when environmental changes (and therefore, risks) are on the horizon. Stories emerging from residents living in the wake of technological-environmental development are a manifestation of situated knowledge that TPC professionals should not only acknowledge, but amplify, because they demonstrate how place factors into such scenarios. The findings in this article are built upon stories from 31 residents in rural West Virginia concerned about ongoing natural gas pipeline development. We engaged visual and place-based storytelling methods—walk-along interviews (Carpiano, 2009) and photovoice or participant-generated imagery (Sullivan, 2017)—that resulted in a collection of stories and photographs documenting often unpublicized effects of pipeline development.

Given that “when we think of experts, we often do not think of vulnerable populations” (Rose, 2016, p. 442), rural residents’ situated knowledge might not initially be seen as expertise, as decision-makers default to industry and legal experts. However, the stories in this article present a nuanced picture of the relationship between residents’ situated knowledge and industry’s presumed epistemic authority, offering “a more adequate, richer, better account of a world” (Haraway, 1990, p. 187). Our approach is rooted in feminist epistemologies that challenge the notion

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of objectivity (Haraway, 1990), accepting that all knowledge is socially constructed. "Situated knowledge" emphasizes the importance of lived experiences in how knowledge is created, codified, and valued; put more simply, all knowledge is dependent upon the situations, experiences, and places it emerges from. So, drawing on Haraway and other poststructuralists from the late 20th century, we contend that there are multiple accounts (or knowledges) of any phenomenon. As a result, TPC professionals must be careful not to dismiss any account based on a supposedly objective preconceived notion of expertise. Rather, when working in contexts related to environmental change, we urge TPC professionals to consider the many factors that shape knowledge, including place.

In this article, we position place as an entry point into this understanding, deploying storytelling as methodology (Powell et al., 2014) and using specific research methods of photovoice and walk-along interviews to illuminate the relationship between situated knowledges and accounts of environmental risk. To start, we lay out the background of natural gas pipeline development in the Appalachian region, specifically West Virginia. We then offer an overview of how TPC has discussed environmental risk, and how stories from rural residents might be a valuable intervention in those discussions. After outlining study methods, we share results that highlight the forms of technical knowledge that dominate conversations about pipeline development, and then complicate those forms by discussing the types of situated, place-based knowledge that rural residents possess. Findings suggest that stories from residents about natural gas pipeline development illuminate the realities of environmental risk—realities often rendered invisible by more powerful institutions whose epistemic authority shapes dominant narratives. Awareness of these stories and their accompanying insights are integral for TPC professionals working on projects related to energy development and more broadly, projects that might bring about heightened levels of environmental risk. Ultimately, we argue that to embrace stories told by rural residents is to center the experiences of communities, which, in turn, legitimizes situated knowledge resulting from first-hand experience, demonstrating that expertise can be located in spaces outside of corporate, technical, or academic authority.

NATURAL GAS PIPELINE DEVELOPMENT IN RURAL APPALACHIA

The Appalachian region has long been a site of energy extraction. Coal has historically been the centerpiece of the energy industry in the region, but the dominance of the coal industry is in decline (Gruenspecht, 2019). Hydraulic fracturing and natural gas pipelines are the new face of extractive industries in the region. Advancements in extraction technologies have made the Marcellus Shale, which encompasses all of West Virginia, a crucial source of energy for the United States. West Virginia has the fourth-largest natural gas reserves of any state despite its small size, making it the nation's sixth-largest producer of marketed natural gas in 2019 alone (EIA, 2021) and positioning it as a key contributor to the energy landscape of the United States.

Proponents of the industry cite economic expansion as a major outcome of this natural gas boom in the state; however, the impacts on West Virginian communities vary (Emanuel, Caretta, Rivers, & Vasudevan, forthcoming). Ironically, despite massive amounts of natural gas emerging from West Virginia, in 2019, 91% of West Virginia's electricity was generated in coal-powered plants (EIA, 2021). This statistic indicates an uneven distribution of resources—and by extension, wealth—where communities rarely use the natural resources extracted just miles from their homes, as gas is exported beyond state borders. Additionally, because natural gas construction often occurs in rural areas with varying incomes, many residents can't afford to pay for their own gas line hook-ups or appliances (e.g., gas ranges, heaters, and the like). Further, and perhaps most importantly, buildout of extractive infrastructure, which includes pipelines, gas wells, processing plants, storage hubs, and petrochemical facilities, has negatively impacted communities around the region. In addition to shifts in water quality (Brantley et al., 2014) and water security (Turley & Caretta, 2020), communities have experienced changes in natural ecosystems (Buchanan et al., 2017) and live with fears of explosions, pollution, and other disasters (Bugden & Stedman, 2019).

Fenceline communities—communities located in close proximity to industrial infrastructure and therefore witness to its effects—are disproportionately inhabited by disenfranchised populations, including communities

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of color and the working class (Fleischman & Franklin, 2017). This reality contributes to a dearth of attention placed upon the lived experiences of communities, especially rural communities that experience the repercussions of, for example, industrialized livestock operations (Wing & Johnston, 2014), the relocation of coal ash (Eldridge, 2018), and natural gas pipelines and accompanying industrial infrastructure (Johnston, Chau, Franklin, & Cushing, 2020).

USING STORIES TO CONTEXTUALIZE ENVIRONMENTAL RISK IN TECHNICAL AND PROFESSIONAL COMMUNICATION

Communities living in the shadow of industrial development have situated knowledges rooted in their perceptions of environmental risk that often emerge through stories about place. Place, despite its ubiquity, has not historically been a pronounced focus within TPC. In 2019, Ross, Oppegaard, and Willerton argued for further work under the guide of a “place-based ethic” that “encourages technical communicators to be more aware of the people and places involved with and affected by a particular technology” and includes “actively acknowledging the environment’s value” and “seeking dialogue among involved parties” (p. 5). To do so is to re-imagine the relationship between “technical communicator, interlocutor, and place as new stakes such as wellbeing and survival are considered” (Aguilar, 2020, p. 7). Pinpointing place as a central component of technical communication offers opportunities to engage previously unacknowledged understandings of complex problems.

Place serves as an anchor for shared community perceptions, including environmental risk. TPC has engaged environmental risk from a variety of vantage points, including the role of documentation in public perceptions of environmental change (Tillery, 2003; Youngblood, 2012), as well as how public discourse could more effectively engage citizens (Lindeman, 2013; Simmons & Grabill, 2007). When ecosystems are disrupted by environmental changes, resident perceptions of risk are often heightened, given the uncertainties that such changes bring. Frost (2018) explains that the lived histories of those at-risk directly shape perceptions of risk; however, “. . . minority or marginalized publics who may have different perceptions of risk than the often-assumed ‘standard’

public based on historical inquiry are often not taken into account” (p. 25). Institutional accounts of risk differ from lived experiences of vulnerable community members that face such risks each day (Pflugfelder, 2019), which contributes to a gap between decisionmakers and residents.

To address this gap, technical communicators might juxtapose multiple accounts of risk in the midst of environmental changes, like those brought on by natural gas pipeline development. In their study examining how farmers and scientists discuss cellulosic biofuels, Herndl et al. (2018) note that scientists talked in the abstract while farmers spoke in specifics, talking “about farms where they lived and worked” (p. 69). While they note the complexity of integrating these two perspectives, Herndl et al. call for more attention to be placed on *how* these perspectives emerge in local settings (p. 89). Others also point to the value of local contexts, which illuminate the connections between personal stories and empirical data (Sackey, 2019); provide opportunities for multiple accounts of problems and associated risks (Moore, 2017b); and privilege “the perspectives of local users and communities that should be driving the discussion” (Legg & Strantz, 2021, p. 67). Community-based understandings of risk, change, and environment must be not merely acknowledged, but seen as foundational in public conversations about technological development and resulting environmental changes. Energy development is a particularly poignant setting to examine community-based understandings of risk and environmental change, and has received attention in TPC (Eichberger, 2019; George, 2019). As Ballentine (2019) notes, constructions of risk are central to conversations about energy development and factor into landowner’s decision-making processes. Ultimately, perceptions of risk are place-based, situated in knowledge held by particular individuals and communities.

A localized notion of risk requires us to examine our ontological approach to knowledge and where we locate epistemic authority. Epistemic authority is endowed to those that are assumed to be in the position of the “knower,” be it a scholar or a presumed “expert” rooted in another form of technical knowledge. The privilege of holding such assumed expertise is typically given to those that possess educational or job titles aligned with the issue at stake (Fricker, 2007). In this study, these presumed experts are oil and gas

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industry representatives or legal authorities. Being in a position of epistemic authority is the manifestation of institutional practices grounded in the ideal of objectivity and the univocal and unambiguous existence of one truth. The knowledge held by *these* experts—as opposed to residents witnessing development—has been gained on the books and on the job, thereby bestowing them with epistemic authority. Hence, lawyers, engineers, and industry representatives are largely considered to be stakeholders that can unequivocally make informed decisions regarding gas and oil development.

At almost the exact opposite end of the spectrum lies situated knowledge, which stresses the contingent, hierarchical, experiential, and relational nature of knowledge production (Rose, 1997). Living in a certain location and experiencing a certain sociocultural context or phenomenon on a daily basis (for example, pipeline development) allows one to notice changes in their surroundings and to gain a deep understanding of that situation that simply cannot be secured through titles alone. Such situated knowledge is deeply circumstantial and contextual. It is ingrained in the person that lives in a location and through a phenomenon (Rose, 1997; Haraway, 1990). Additionally, situated knowledge evolves over time and is shaped by social relationships" (Caretta, 2015). While situated knowledge is often not recognized by a positivist institutional understanding of knowledge and expertise that Western society is grounded upon, we argue that situated knowledge is just as important as other forms of knowledge when it comes to communications around environmental risk. One way in which such situated knowledges are often shared is through storytelling.

Stories are situated—rooted in specific contexts and places—and illuminate the cultural, material, and historical connections between place and technological progress (Edwards, 2020). Stories are also flexible, “ideal for engaging considerations of social justice by privileging participant agency and voice” (Jones, 2016, p. 480), and powerful, as “stories broker change because they mediate between social structures and individual agency” (Faber, 2002, p. 25). Stories connect community members to knowledge and to one another, making them integral to addressing public problems. Since “stories are the data used making sense of the past and predicting the future” and are the foundation of our individual and group identities (Small, 2017,

p. 240), they deserve attention in conversations about development that impacts communities. By listening to and amplifying the experiences of community members, TPC professionals can position situated storytellers as experts in their own right, leaning into the belief that “citizens can participate in technical discussions of policy and have valuable information to contribute to the decision-making process” (Simmons, 2007, p. 130).

METHODS

Driven by the commitment to highlight the experiences of rural West Virginia residents who have witnessed the outcomes of pipeline development, we used place-based participatory methods in this study: photovoice and walk-along interviews. Photovoice is a research method that asks participants to take pictures of their daily lives in order to reflect on their concerns (Sullivan, 2017), often shared through narratives relayed in subsequent interviews or focus groups (Carlson, 2021). Similarly, walk-along interviews allow participants to lead the researcher through their lived experience of a place and invites them to share data through stories (Carpiano, 2009). As a technical communicator and a geographer, we come from different disciplinary backgrounds, but two primary methodological similarities emerged in this project: first, place is an integral component of lived experience that is not always accounted for in empirical studies; and second, visual research methods often elicit rich stories that hold great significance for community members. The inclusion of participants, their places, and their stories in discourse about environmental risk and how to mitigate it is of great concern for technical communicators working around these issues.

Since photovoice allows participants to capture their perceptions over a period of time and then reflect on their images with researchers, the participants in this study were able to share insights on how their land was changing over time. Leading up to interviews, participants took photos of their property and collected pictures they had taken in the past. Then, during our walk-along interviews, they shared these pictures and showed us around their property so that we could see first-hand the impact that pipeline development had on their land. Together, these methods illuminated participants’ place-based knowledge and deepened

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researchers' understanding of residents' everyday lived experiences in the wake of pipeline buildout.

In Summer 2020, we conducted 31 socially-distanced, masked interviews across central and eastern West Virginia. We initially recruited participants through several local and regional email listservs and social media groups related to natural gas pipeline development; however, our participant pool increased through snowball sampling, where participants shared members of their social networks (often neighbors) who were also affected by pipeline development. As a result, we were able to speak with landowners who had varying opinions on pipeline development. After completing the interviews, they were transcribed and shared with participants for member-checking (Caretta, 2016). Transcripts were analyzed for references to expertise, knowledge, information, and education, with particular attention directed towards how these concepts were situated within participant stories, through codes developed in Nvivo, a qualitative analysis software.

We then set out to validate these initial findings through a survey and a virtual focus group as part of the member-checking process. The survey asked questions about concerns and property value and used images we gathered from interviewees to gauge whether similar events were witnessed by survey participants. We distributed the survey to residents in West Virginia, Ohio, and Pennsylvania, in order to include landowners we were not able to interview during the summer due to COVID-19 limitations, and to check results against the experiences from other areas in West Virginia and the region as a whole. Finally, preliminary results and analysis from both the 31 interviews and 48 survey responses were used as the basis for member checking through a focus group. The focus group was held via Zoom in November 2020 with eight participants, each of whom had direct experience with pipeline development on their land.

EPISTEMIC PERSPECTIVES ON PIPELINE DEVELOPMENT ROOTED IN TECHNICAL AND LEGAL KNOWLEDGE

Energy development is a complex process, with several forms of technical and legal knowledge accorded varying levels of epistemic authority. Major decisions about pipeline construction are typically made by industry stakeholders with some input from federal,

state, and local policymakers. Industry representatives often work with federal- and state-level agencies to gain legal approval for their plans and to set up regulatory relationships with agencies like the Department of Environmental Protection. They also develop relationships with local governments and economic development groups.

Throughout this process, epistemic authority typically manifests through technical and legal understandings of land, rather than lived experiences of landowners or community members. For instance, being an engineer endows one with an assumed expertise over the lay of the land that cannot be called into question by community members who have resided in the area for decades. Engineers are given authority over the knowledge and, ultimately, the planning and implementation of pipelines because they possess a degree attesting their knowledge in such a field—even if they have never physically visited the very property they make plans to develop (which is often the case, according to interviewees, who told us that many engineers are located states away). In fact, conversations with landowners often occur well after plans are drawn up; many participants reported learning about pipeline plans for the first time well after construction had started in their counties, confirming that landowners' situated knowledges did not factor into development decisions.

Technical Measurements of Land and Scientific Calculations of Risk

Technical documents and scientific measurements are central to pipeline development. Various subject matter experts contribute their knowledge to technical documents, including: surveyors who create topographical maps of possible development sites; engineers who plan pipeline paths; environmental testing firms that set up air or water monitoring systems; and gas company representatives (known commonly as "landmen") who interpret these documents in conversations with landowners. Documents like maps and testing reports are shared as supposedly objective accounts and, therefore, factor heavily into decisions made by industry representatives and landowners alike.

Perhaps the most frequent technical account of land that participants referenced were maps. They mentioned maps of all stripes—from their own

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records, from the company, and from the county assessor's office. According to multiple participants, these maps were important for landowners, who used maps to advocate for themselves during negotiations, and for gas companies, who used maps to justify and execute pipeline construction. Several mentioned the importance of tax maps as public records and suggested that companies try to plan construction through "farming fields . . . wide open spaces cost them less money" than steep inclines that dominate West Virginia landscapes (Participant 6).

Maps were also an important source of information for participants as they sought to learn more about pipeline development in their communities. Participant 10 mentioned the use of maps at public meetings presented by energy companies. Participant 1 told us that they frequently looked at online maps showing pipelines across the United States, since companies were required to share interstate and in-state lines alike. Participant 8 said that they inadvertently found out that plans for their property were already finalized, without their input, because they had looked closely at a map a landman provided during a visit. These documents are the manifestation of that epistemic authority that residents have not been able to attain, as they do not possess the skills to produce these maps and hence, could not challenge the authority of those documents; however, as Eichberger (2019) notes, maps are by nature a product of selection and exclusion, but "omissions, even if unintended . . . silence certain voices telling certain parts of the story" (p. 18). Maps are fundamentally incomplete, requiring us to consider what elements are left out in their creation. Further, depending on who creates the map and what elements it shows, constructions of risk vary widely.

On the contrary, soil and water baseline tests, paid out of pocket by landowners, are something that residents often are able to use to counter the industry's own baseline testing. Typically, a company takes soil and water baseline samples from residential areas before pipeline construction begins, but rarely shares results voluntarily with local residents. Additionally, because the industry directs such tests, those samples are tested through labs that local residents often describe as favorable to the industry. So, even if residents *do* have the financial resources to pay for their own tests, they often find that their own tests contradict the industry-sponsored test results. Having the financial resources

to be able to hire a lab to conduct independent testing periodically is crucial to have any recourse against the industry in the event that soil or water gets contaminated. Participant 11 had their water tested six times in 13 years because they wanted to have records of their water quality over time but expressed frustration with how expensive it was. Participant 12, when asked if there was one piece of advice they could give to someone in a similar situation, said, "Test your water, test your air. Document where you are, get your baseline."

Outsourcing epistemic authority to independent experts that can challenge industry experts provides residents with some assurance that if their water or soil were to be contaminated, they would have proof to demand compensation and remediation from the industry. Test results might also indicate if they might need to stop drinking their water or eating food from their own garden (see Turley & Caretta, 2020). For the participants who could afford them, these tests were a significant source of security. Participant 1 said that after many encounters with the company, they were able to get results from a water test conducted by a supervisor and thought "the only reason that happened was because I was such a pain in the butt." After they had accessed public records to see what testing procedures the company had proposed for their entire county, they were shocked to find out that "as close as they were to some homes, they only had four water well tests scheduled." Companies and regulatory entities alike locate power in official definitions and documents, leaving little room for landowners' experiences in larger conversations about energy development—especially if those experiences contradict industry accounts. Ultimately, while official documents suggest low levels of risk, the experiences of landowners and residents might suggest a heightened sense of risk; TPC practitioners should be aware of these different accounts and take landowner experience into consideration.

Legal Definitions of Land and Landowner Rights

Another source of epistemic authority that dominates pipeline development is the law. Andrews and McCarthy (2014) point out that when it comes to extractive industries, the formal legal realm is "sufficiently complex and ambiguous" with resources that can be leveraged in multiple ways (p. 13). All 31

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participants referenced the importance of federal, state, and/or local laws in governing pipeline development. Many also talked about mineral rights and surface rights. In energy-rich areas such as West Virginia, land ownership and mineral ownership are often separate: that is, there is one deed for the surface area of a property and a separate deed for the natural resources that lie below the ground—minerals, coal, and often natural gas or oil. Making circumstances more complicated, sometimes mineral rights are leased, meaning that someone other than the deed-holder is receiving compensation for extracted minerals. As a result, mineral rights are a confusing, yet determining factor in pipeline development. (Though our discussion of land ownership is focused on contemporary law, these properties are on the ancestral lands of the Cherokee, Shawnee, Saponi, and Delaware people, whose experiences are not captured in our work because they were forced from this land. We would like to note this because even as we seek to honor the place-based knowledge of residents, this knowledge is tangled in complex histories.)

Full mineral ownership was relatively rare among the participants we spoke with. In some scenarios, the minerals and the surface were split as early as the 1800s, meaning that mineral owners might be several generations removed from the property and therefore unconcerned with what happens to the landscape. When asked if they still owned their mineral rights, Participant 9 responded, “No. Nobody does . . . Mine were taken in 1889.” This sentiment was echoed by many others. For those that did possess mineral rights, they usually did not have the rights to their entire parcel of land; oftentimes, mineral rights are split between many parties. Participant 31 estimated that there were dozens of other mineral owners linked to their individual parcel of land.

If a landowner does not have the rights to their minerals, they have no say in how (or when, or if) resources are extracted from underneath their property; however, they can dispute changes to the actual landscape, such as the construction of well pads or other structures. But often, that isn’t enough to prevent the extraction of gas from their parcel of land. According to Participant 3, “The company could’ve said, ‘Okay, here’s the lease from 1896 for the minerals that were leased off this property. We’re going to go by this lease, by the letter of the law, and we can come

in here and do whatever we want,’ which they can.” Law, then, becomes an important source of knowledge for stakeholders because it directly affects what rights landowners have and what actions they might take. Land use laws are complicated, and most participants consulted lawyers at some point in their dealings with energy companies: “There’s no way that anybody can fight, negotiate, know all the ins and outs that you need to know without at least talking to a lawyer” (Participant 26).

Landowner agency is significantly restricted by technical and legal understandings of land, which often oversimplify land issues and can be used to stifle the concerns of landowners. These definitions contribute to power dynamics that place well-resourced industry stakeholders in a position of epistemic authority and control. And while these forms of knowledge do not necessarily negate the expertise of landowners, they are often wielded by institutional powers in ways that render landowner experience as less reliable, and therefore, less valuable. This dynamic leads to significant gaps between stakeholders during pipeline development. Lived experiences are practically never represented in official narratives about pipelines; as a result, these accounts are incomplete, since landowner and resident knowledges arguably capture the most intimate and up-close accounts of pipeline development in rural communities. TPC professionals should seek out situated, place-based accounts alongside more traditionally accepted accounts from technical and legal experts.

SITUATED PERSPECTIVES OF RURAL LANDOWNERS AND RESIDENTS

Given the dominance of technical and legal expertise, resident accounts of events are often under-valued; however, the residents we spoke with shared many insights that only *they* could have because of their familiarity with their places. These insights are not documented in an official report or represented on a map, but they are just as important for cataloging the effects and risks of pipeline development. What’s more, these insights were shared through rich stories—stories that demonstrate how closely tied together land and life can be. Landowner expertise, then, offers a dynamic and accurate account of how natural gas pipelines have shaped the lives of rural community members,

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often packaged in narrative. As a result, resident stories should be valued as an important form of insight in development scenarios.

Landowners Possess Specialized Topographical Knowledge

First, landowners possess knowledge about their land: in fact, they know that land better than anyone else. Many of the landowners we interviewed were deeply acquainted with the landscapes around them, as they built homes, farmed crops, gathered mushrooms, and raised livestock. In every single walk-along interview, participants talked in great detail about their land, showing us exactly what they were talking about, either through photographs or as they walked us around their property. This keen spatial awareness can only be developed through firsthand engagement with the land. And as participants pointed to different markers or areas that had been damaged or changed by development, they told us stories—stories about their family, about their childhood, and about their livelihoods. Their stories are both a mode of transmitting knowledge *and* a method for illuminating the complexities of environmental change, all the while building relationships between storyteller and listener.

Many participants shared, in significant detail, their recollections of conversations with gas company representatives sent to negotiate a settlement for land to be used for pipeline construction. Several participants challenged initial settlement offers based on incomplete assessments of their land's assets. For example, Participant 8 showed their landman pictures of a few well-placed acres that could be the site of vacation rentals or recreational space, increasing its value. As a result, the pipeline representatives added 30%–40% in the next offer “because they could now understand a scenic view of the land” which hadn’t been initially captured in tax records or maps. This evidence, which would not be categorized as grounded in epistemic authority, embodies the contextual, observational, and experiential nature of situated knowledge.

In several interviews, participants noted that energy company maps didn’t always match their own knowledge of what the property actually looked like. For example, focus group (FG) Participant 1 shared that their family’s property had several ephemeral streams, or dry stream beds that only fill after significant rainfall. Couched in a longer story explaining how growing up

in West Virginia had shaped their knowledge of how water interacts with steep hillsides, they said, “I mean, it might look dry in August when the surveyors are out there, but we know where the streams are.” A map is a static representation of a landscape at one particular moment: even though there is absolutely a stream in a location multiple times during the year, “it’s not there, according to the map, or according to the geologist.” FG Participant 3 echoed FG Participant 1 by sharing that they had experienced a similar situation in regards to natural water sources. They noted that the maps from a major pipeline project “failed to list springs that were *very* obvious springs.” Though all participants gestured towards maps as an authority in some scenarios, these reflections demonstrate that maps do not always accurately represent a natural environment. Maps, in fact, are often produced by experts that do not reside on site and hence, easily miss seasonal shifts such as ephemeral springs or mud slides.

Several participants suggested that difficulties with pipeline construction, such as slips (areas where a pipeline had started leaking because of the steep terrain) were related to the mountainous landscape of the region. Such terrain had not been effectively represented in the aforementioned maps, leading to faulty excavation and construction patterns, which then can mean issues with erosion or leaks later. Accordingly, participants repeatedly pointed to the importance of first-hand knowledge of a landscape, and how static representations might not accurately communicate “the problems going up and down these steep slopes” (Participant 18) to construction crews.

Landowners Witness Firsthand the Effects of Pipeline Construction

During construction periods, which usually lasted several months during the spring or summer, participants reported significant disruptions to their daily lives. Many mentioned a worsening of air quality during pipeline construction, in addition to light pollution at night if crews were coming up against a deadline. Heavy equipment traffic on unpaved roads, running engines, digging, and blasting contributed to the increase of dust and fumes which lowered quality of life for rural populations used to silent, quaint roads and clean air (Caretta et al., 2021). Since participants can’t escape these construction zones, they are forced to contend with the stresses of pipeline development

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constantly, and had many stories teeming with disruption, exhaustion, and frustration.

Landowners also understand how changes to the natural environment might heighten environmental risks. Participant 10 shared that, as someone whose primary water source is a shallow well, they were constantly worried about water quality and availability: “And then you would see these trucks sucking water out of the creek. And you know we have some years of drought and you see just muddy creek bottoms, and it was very upsetting.” Here, Participant 10 demonstrates their knowledge of the shifts in water volume during particular periods of time, as well as an understanding that siphoning gallons of water out of creeks could have an-area wide effect on supply. FG Participant 1 said that, “I would know not just my own property, but [generally] how water works around

here . . . how soil works, how the soil is moving.” They located their knowledge in their time “growing up here”: “It’s not just dealing with this with pipelines, but also highway construction around here. Everybody who sees where they’re gonna put these things is like, that ain’t gonna work. And no one listens.” FG Participant 1’s knowledge is situated in their decades of living and working in West Virginia and witnessing how construction projects might result in unsafe infrastructure that needs unexpected maintenance.

Many participants shared such feelings of not being listened to, as they felt their property had been forever altered by the construction of pipelines. Participant 6 lived on a farm that had been in their family for nearly a century, and in 2016, pipeline construction began. After an extended legal battle, their family was forced to settle with the company, which sited a pipeline directly



Figure 1. A Hay Field That Has Been Altered by Re-Seeding After Pipeline Development

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through their farm and “ruined probably 6 or 8 acres of our best grass.” After digging a trench and burying the pipeline, workers were supposed to re-seed the area:

But it's nothing but a weed patch . . . They had it separated, the good topsoil and the other stuff, and they put it all in but then they worked it so much that when they put the topsoil in they bunched it right down into the shale. So there was nothing there. They didn't know what they were doing at all. (Participant 6)

Figure 1 demonstrates what Participant 6 described to us in their longer story that outlined how pipeline development had occurred on their land over a number of years. In the middle of the photo, there is a large strip of field that appears darker than the rest of the field, marking where the pipeline has been buried several feet below the surface. That strip is markedly different in consistency and color, assumedly from the grasses that are now growing there and the change in soil quality. While at first glance, this might not be significant, the story that this image is rooted in—one of sadness and lingering frustration—reveals its significance, as that land can no longer yield hay, which is an important crop for the family business. For Participant 6, this strip of land is the manifestation of years of struggle that had irreversible effects on their family, their business, and their land.

Health and safety concerns were another shared theme among participants. FG Participant 2 expressed frustration with how they and their neighbors contacted regulatory organizations with concerns about unusual odors near the 36-inch pipeline in close proximity to their homes. Despite their repeated efforts, FG Participant 2 stated that no action had been taken, citing the “false idea” that “if [pipeline developers] get a permit, that means it's safe.” They continued that powerful decision-makers, protecting their own interests:

They try to brush off the actual facts. They try to treat the people as if they don't know what they're talking about. ‘So, it smells bad? That's not really dangerous’ . . . it's like they put their hands on their ears and close their eyes and just flip a coin for our safety. (FG Participant 2)

Even though FG Participant 2 and their neighbors followed all of the proper steps to report their issues,

their experiences were not validated by institutions with epistemic authority. This caused participants frustration and fear, as they felt they were living in risky situations and their knowledge was continually dismissed, rather than being seen as specialized, situated, and important. Repeatedly, participants demonstrated their depth of knowledge—about their land, about natural gas pipeline development at large, and about the deep, lasting impact of this development on their lives and livelihoods. This knowledge often emerged as they shared their memories of growing up on that land as a child or moving onto a property after getting married. For example, we, as the researchers, would walk along with participants across their property, and they would oftentimes point to a tree or a creek, and then tell a rich, often lengthy story about how that marker had been changed or preserved throughout development. And despite this knowledge, they repeatedly told stories of how that knowledge had been dismissed by powerful stakeholders.

Markers of place can be entry points for conversations about the impact of technological and environmental development. TPC professionals working with affected communities might seek out opportunities for residents to share important markers of place and subsequently reveal important insights about risk.

CONCLUSION: FRAMING STORIES BASED ON SITUATED KNOWLEDGE AS EXPERTISE

While landowners are typically not seen by industry or policymakers as having special knowledge of pipeline development—and are often actively dismissed or ignored by those actors—they are experts in their own right. Their in-depth knowledge of their property and how it appears in different seasons and under different conditions gives them insight into how pipeline development might impact natural features that one-dimensional, straightforward representations of land and risk simply don't have. Additionally, landowners live in direct proximity to pipelines and related infrastructure and see on a daily basis what changes might occur as a result of that development. The situated knowledge of community members living alongside natural gas pipelines and accompanying infrastructure is just as important to ongoing conversations about energy development as the

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epistemic authority rooted in technical, scientific, and legal accounts of land and natural resources. And stories are fundamental in efforts to assemble a robust account of how energy development heightens environmental risks, including in rural areas where vulnerable community members shoulder the burdens of such development.

In addition to topographical and experiential knowledge, landowners and residents possess knowledge about their communities and how energy development has shaped the region as a whole. Repeatedly, participants referenced the deep presence of extractive interests in West Virginia: first, it was coal or timber logging; then hydraulic fracturing; and now, natural gas pipelines. “It is an economic justice issue. And we’ve been an extraction state for 150 years,” Participant 7B said. “And we still rank at the bottom, in lots of social and economic measures of wellbeing and health.” This history, along with the dominance of the energy industry in the state (not to mention the development-friendly policies passed in the state legislature) has created a system “rigged against landowners” (FG Participant 2). By locating their own experiences in larger cultural narratives, especially those related to the dynamics between extractive industries and communities in Appalachia, participants shared their connections to a long, often painful history.

This history is made up of stories—shared cultural tales and individual experiences that demonstrate the importance of bearing witness to social, cultural, and environmental changes over time. The role of stories in knowledge formation cannot be understated. And while stories are, by their nature, incomplete and subjective, they still hold important insight that should be taken into account as we try to map out the implications of any sort of development that heightens environmental risk. As Hemmings (2005) argues, in telling stories that counter dominant narratives, we must “be attentive to the affective as well as technical ways” that stories work (p. 120). Stories anchor specialized knowledge that often is not heeded. Simply put, landowners are experts of place, because of their situated knowledges that illuminate the connections between different elements of place, and stories are one way of encapsulating and sharing that expertise.

Technical communicators ought to not only seek out the stories of community members living with heightened levels of environmental risk, but to

actively amplify those stories and advocate for those stories to be included in official accounts of energy development—accounts that often only include legal or technical information. Technical communicators working in energy or related sectors might note the type and source of data they work with: Are all stakeholder perspectives reflected in this data? Are there elements missing from these renderings of development? Have there been efforts to connect with vulnerable members of rural communities (e.g., elderly, disabled, poor) who do not have the resources to seek out legal or technical experts to speak on their behalf? And, how is place represented in this information? Place has found its way into designing for locative media (Fagerjord, 2017) and public planning (Moore, 2017a), but a more expansive understanding of how place shapes *all* technological and environmental development would offer technical communicators multiple entry points into conversations with stakeholders as well as opportunities to emphasize the lived expertise of residents alongside other, more traditional accounts.

Participatory and place-based methods, like those we used to conduct this research, are one way that TPC practitioners can invite stories and amplify the experiences of communities directly affected by technological and environmental changes, including energy development. Adopting place-based methods like walk-along interviews—not so different from think-aloud protocols commonly used in user testing (van den Haak et al., 2007)—and photovoice—not so different from using visual narrative or graphics in a user-testing scenario (Loel, 2005)—is one way that TPC professionals can make space for situated knowledges. As technical communicators find themselves in increasingly diverse professional spaces and working to address different types of problems, it becomes even more important to develop methods for engaging the knowledges of all stakeholders. Strategies for eliciting stories practically and methodologically privilege the lived experiences of community members. To develop and utilize such strategies is an ethical choice in an arena where “knowledge and risk [are] mediated through corporate interest” (Hopton, 2019, p. 6). Technical communicators can not only adapt the methods shared in this article, but might also make room for stories and storytelling in their work in other ways as well.

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In this study, participants shared their stories about natural gas pipeline development, illuminating risks inherent in the process that are often not made visible. And while TPC has recently begun to embrace stories as a way to seek out and share knowledge, that is not universally the case, resulting in the continued devaluation of situated knowledges that are often rooted in place. While we agree with Mazurkewich (2018) that “technical experts need to get better at telling stories,” we argue that technical experts need to get better at *listening* to stories, too, and acknowledging that situated knowledges are expertise that should be consulted in scenarios where communities are subject to heightened environmental risk.

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Amplifying Indigenous Voices through a Community of Stories Approach

By Richard T. Mangum

ABSTRACT

Purpose: Using the Dakota Access Pipeline (DAPL) controversy as a case study, I argue that not only do counter narratives need to be told, but a reframing of storytelling toward what I call a community of stories approach is needed in order to amplify marginalized voices, particularly those of Indigenous people.

Methods: Built on the foundational methodologies of case study and Indigenous methodologies, I investigate the documentation surrounding the Dakota Access Pipeline case. In an effort to understand how to amplify Indigenous voices in counter narratives, I rely on antenarrative analysis, storytelling, and listening.

Results: My findings suggest that conceptualizing stories as interrelated communities provides a strategy for amplifying Indigenous voices and revising Western approaches to environmental risk. I offer three different approaches to understanding the relationships among stories. The first is the dominant narrative versus counter narrative, the second is the layered narrative, and the third is a community of stories. Each of these three approaches offers an increasingly complex way of thinking about stories and storytelling, the relationships between power, and which stories are amplified and which ones are not.

Conclusion: Decolonized storytelling methodologies and communities of stories can play important roles in helping technical communicators understand the diverse narratives of any case. Because there is not a case in the world that is not flanked by dominant and counter narratives—all cases have a dominant narrative and layers of counter narratives—technical communication and rhetoric (TCR) teachers and practitioners are presented with an important opportunity to do the critical work that communities of stories demand.

KEYWORDS: Stories, dominant narratives, counter narratives, community of stories approach, layered narratives approach

Practitioner's Takeaway

- Working with Indigenous populations requires a different approach and should privilege storytelling.
- Listening *for* stories as opposed to simply listening to stories has the potential to move technical communication researchers from the role of a passive listener to the role of an active listener.
- The layered narrative approach shows how dominant and counter narratives can co-exist in contiguous rhetorical spaces; however, the ability to co-exist is not enough.
- In a community of stories approach, stories that work together shift the focus away from power and toward honoring the stories important to a given community.

INTRODUCTION

It is no secret that Earth is suffering from humanity's obsession with automation, industrialization, and homogenization—a term Wildcat (2009) uses to describe human-based inclinations toward globalized one-size-fits-all solutions. In reality, these obsessions put tremendous strain on the planet and its life sustaining systems of air, water, and earth. For example, MacMunn (2019) recently reported that an increasing number of Americans (more than 4 in 10) live with unhealthy air quality that is blamed on ozone and particle pollution. Similar reports are published regularly for declining water quality and land pollution. Despite federal and state agencies tasked with monitoring and reducing pollution, pollution levels are on the rise and continue to have devastating impacts on the planet. Perhaps it is time to reconsider current approaches to curbing pollution of all types and to seriously contemplate new and alternative approaches for reducing and even eliminating pollution.

Consider how environmental decisions are made in the United States and whose narratives inform those decisions. Despite the multivocality of most communities (Dragga & Gong, 2014), current environmental discourse in the United States often favors dominant narratives that privilege one voice over others. This privileging legitimizes certain groups while delegitimizing those groups pushed outside the boundaries of (or marginalized by) the discourse's dominant narrative. This process of legitimization in the context of a dominant narrative generates univocality in the discourse and ignores other voices that might benefit a given conversation. As evidenced by Dragga and Gong's (2014) work, the rhetorical power granted to dominant narrators can have catastrophic impacts on entire communities. Indigenous people know this truth all too well as their knowledge about how to care for the environment is routinely ignored or dismissed by state and federal agencies charged with managing environmental resources, which have created too many environmental crises in recent years (e.g., oil spills, wastewater spills, plastic pollution, wildland fires, water insecurity). Continued dependence on dominating dominant narratives tied to environmental governance will not only continue to limit how technical communicators, legislators, policy makers, and others work to solve environmental issues and problems, but

it will continue to reinforce the settler colonial idea that certain populations, like Indigenous ones, are expendable.

Some Definitional Work

It is helpful to pause for a moment to define my use of *dominant narrative* and *counter narrative*, and to identify their relationship with stories, voices, and storytelling. I draw on Wilson (2008) and Boje (2001) to define *dominant narrative*. For Wilson, *dominant* excludes those who fall outside of the "powerful majority" (p. 35). Boje uses the term *grand narrative*, which he defines as a "regime of truth, a metanarrative that subjugates and marginalizes other discourses" (p. 35). Boje favors the *grand narrative* term, but he also employs terms like *corporate narrative*, *great-CEO narrative*, *official narrative*, and *universalism*. Boje defines universalism as a "historical account that privileges one relatively narrow point of view or grand principle that glosses over differences in other stories" (p. 39). Not only do dominant narratives most often represent the official narrative, but they can play an important role in contextualizing the often-overlooked counter narratives—the stories of those outside the arc of power.

Throughout this research project, I use storytelling because stories are important to this work. King (2005) states that "the truth about stories is that that's all we are" (p. 2). Stories—oral, written, and visual—compose a tapestry that represents a person's life. For Indigenous people, "storytelling acts . . . as a central knowledge-making practice . . . that encourage[s] us to look again to peel back each layer and gain deeper understanding" (Legg & Sullivan, 2018, pp. 29–30). Too often, and as I'll demonstrate later, who gets to tell stories and how stories are told has a lot to do with power—most often telling and reinforcing dominant narratives. Ultimately, I argue that not only do counter narratives need to be told, but that a reframing of storytelling toward a community of stories approach is needed to amplify marginalized voices like those belonging to Indigenous people. As evidenced by the Dakota Access Pipeline (DAPL) controversy, Indigenous people who rallied around the battle cry of "Keep it in the ground!" were painted as radical environmentalists by conservative politicians, pundits, and local media outlets that covered the NoDAPL movement. Instead of opting for cooperation, non-Indigenous decision makers pushed

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dissenting voices to the margins where they could not be heard. In the NoDAPL case, this marginalization of voices had the effect of extinguishing the diversity necessary for solving real problems that threatened the environment in socially just ways.

A Brief Overview of the Dakota Access Pipeline (DAPL) and the NoDAPL Movement

In June 2014, Energy Transfer Partners (ETP) announced plans to construct a 1,172-mile pipeline that would transport 570,000 barrels of crude oil per day from the Bakken oil fields in North Dakota to an oil storage terminal in Patoka, IL. In their 2015 Environmental Assessment, the U.S. Army Corps of Engineers determined that the project posed no significant impacts to the environment. Dakota Access, a subsidiary of ETP, claimed that DAPL does not cross the Standing Rock Sioux reservation, although it does cross under the Missouri River 0.5 miles north of the reservation's northernmost boundary. The fact that DAPL crossed the Missouri so close to their northern boundary, and that the river represented the only water source for the Standing Rock Sioux Tribe, a spill at the location where the pipeline crosses under the river would devastate the tribe's water supply and the fragile river ecosystems that many Standing Rock Sioux regard as their other-than-human relatives. Relational accountability compels many Indigenous people to rise up in opposition to oil pipelines, dams, pollution, and anything else that threatens to poison and devastate the environment. By understanding how many Indigenous people consider the Earth, non-Indigenous people might better appreciate why so many people were willing to stand with Standing Rock during the NoDAPL movement—to protect the land and the water (Goens-Bradley et al., 2016; LaDuke, 2016; Red Warrior Camp, 2017). Long before and since Standing Rock, both the land and the water have been the subjects of passionate debate and argument. Relational accountability not only helps humankind to understand they are accountable to all of their relatives (human and other-than-human), but it can also help explain the dual meanings behind the predominant rallying cry of water protectors at Standing Rock—water is life. Taken literally, *water is life* means that life cannot exist without water and therefore must be preserved and protected (Goens-Bradley et al., 2016). However, from an Indigenous-relatives perspective, water possesses

life and is one of our other-than-human relatives. Viewed through the lens of relational accountability, humankind is accountable to water. This same way of understanding accountability to water can be applied to how people understand and interact with the land, the soil, animals, and any of the other strands that make up the web of life.

By thinking of land, water, animals, and plants as living relatives rather than resources, perhaps non-Indigenous people can begin to understand that all life is sacred. As such, sacred sites take on new meaning. The word sacred is tied to deity, worship, reverence, and respect. When the Standing Rock Sioux argued that sacred sites were threatened and disrupted during the construction of DAPL, they were not only referring to burial grounds of human relatives but were also referring to sacred ground occupied by other-than-human relatives, including sacred stones and vegetation (Ravitz, 2016). The construction of the pipeline, which required the use of heavy equipment such as dozers, graders, excavators, loaders, and backhoes, not only altered the natural features of the land, but in some cases erased them forever. For these reasons, youth activists from the Standing Rock Sioux Tribe spoke up in opposition to the pipeline. For the tribe, DAPL represented a risk too great to accept. The NoDAPL movement and the gathering of nations at Standing Rock was the first time that the Sioux Nation had come together in over 140 years. It was also the first time that so many of the world's citizens gathered (in-person and virtually) in support of an Indigenous led movement. Despite these efforts, the pipeline was completed in June 2017. The Standing Rock Sioux Tribe continues their fight against this reincarnation of the black snake. Concerns over oil spills and leaks drive this fierce opposition against the pipeline. Despite the claim offered by Siguaw and Rowe (2016) that "DAPL designed the pipeline to not leak or have a (spill)" (p. 4), periodic spills and leaks from DAPL illustrate just how difficult it is to construct an oil pipeline that doesn't leak. Mike Faith Jr. (2019) observed that after just two years of operation, DAPL "experienced 12 spills of over 6,100 gallons of Bakken crude oil." It is precisely this threat that worries the Standing Rock Sioux Tribe and other water protectors.

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Despite best efforts to have Indigenous voices and stories heard, the fact remains that the “public is woefully uninformed about Indian issues” (Morman, 2018, p. 187). This ignorance, deliberate or not, portrays non-Indigenous Americans as unsympathetic and self-interested. Furthermore, and perhaps more importantly, the non-Indigenous public is missing unique opportunities to use Indigenuity or “Earth-based local indigenous deep spatial knowledges” (Wildcat, 2009, p. 48) to reverse the environmental entropy Earth currently faces. Wildcat explains that “instead of expending the energies modern humans devote to changing environments, Indigenous knowledges offer insights into living well on Unci Maka (Mother Earth) because they are fundamentally cooperative and collaborative constructions” (p. 77). Wildcat’s voice is just one of many Indigenous voices worth listening to if our communities are serious about solving some of the environment’s most pressing problems.

Amplifying Indigenous voices who for centuries have suffered the effects of cultural marginalization represents the central focus of my research. For me, finding real solutions—not just bureaucratic ones—for protecting the environment are critical, and lead to the questions at the center of my research project. The questions that I’m asking include:

- What do dominant and counter narratives teach us about protecting the land?
- How might we amplify Indigenous voices to better protect the land?

The word *amplify* is worth considering here. In traditional contexts, amplify means to make louder. If a quiet voice is made louder, then, technically, it has been amplified. Even if the volume has increased just a little bit, amplification has occurred. On its own and understood in this way, amplification is nondescript and imprecise. When I use the term amplification, I am not equating that term with turning up the volume or using a bigger megaphone to amplify voices and stories. I don’t think the amplification of stories works this way, at least not in the context of determining how to amplify Indigenous voices. If not associated with volume, then what does it mean to amplify stories? Is it about virtue signaling or reposting on social media until a particular message goes viral? Or is it simply an act of telling stories or retelling them (Faber, 2002)?

Answering these questions are at the center of what this research project seeks to learn and discover.

METHODOLOGIES AND METHODS

One way of understanding environmental risk is to analyze the ways narratives flow in and out of environmental cases. This study uses Indigenous methodologies, including decolonized storytelling methodologies, to analyze a particular case of pipeline rhetorics, or the discursive practices germane to discussions of pipelines. Case study helped me examine one case within the larger tapestry of the environmental injustices exacted on Indigenous people. In addition to case study, I sought out Indigenous methodologies that would honor the work I was doing to learn how to amplify Indigenous voices. I turned to Hill and Coleman (2018) and Wilson (2008) who advocate for Indigenous methodologies in research. They stress the importance of relationships, equity, diversity, and sharing knowledge through stories.

Case Study

The NoDAPL movement was ideal for my study because it was a relatively recent event in circulation in the public sphere. In analyzing the case, I gathered two separate corpora of documents and stories that focused on both the dominant DAPL narrative and the Standing Rock Sioux Tribe’s counter narrative. My overarching research methodology is case study, which Yin (2018) defines as “an empirical method that investigates a contemporary phenomenon (the ‘case’) in depth and within its real-world context” (p. 15). According to Yin, a case study “relies on multiple sources of evidence, with data needing to converge in a triangulating fashion” (p. 15). Sullivan and Porter (1997) caution that “methodology that is portrayed as a set of immutable principles, rather than as heuristic guidelines, masks the impact of the situation—of the practice—on the study in ways that could unconsciously reinscribe theory’s dominance over practice” (p. 66). Anxious to avoid any type of dominance in a research project that rejects anything that dominates, I wholeheartedly subscribe to Sullivan and Porter’s perspective.

Within this context, I used case study as a heuristic guideline that might not match the design features of traditional case studies. However, given this research and the complexity of listening to both the dominant

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and counter narratives of the NoDAPL case, case study was the best methodology. In the NoDAPL case, I relied on 28 different documents from both Indigenous and non-Indigenous authors. These documents (both internal and external) included reports, newspaper articles, correspondence, Indigenous narratives, and other sources, which made it complex because I looked at multiple variables. In answering my research questions, I was deliberate in my efforts to avoid isolating any piece of these narratives. Instead, I worked to see the entire case in all its complexity, especially its cultural complexity, which characterized the need for a case study. Given the sheer enormity of the case, including its political, rhetorical, and cultural implications, to look at it as something smaller than a case would have sacrificed the legitimacy of this research. Some might argue that this research aligns more closely with document or discourse analysis; however, I was not trying to understand what was *in* the documents; rather, I tried to understand the case *through* the documents.

Decolonized Storytelling Methodologies

In addition to case study, I relied on the Indigenous methodologies articulated by Wilson (2008) and Hill and Coleman (2018), which place relationships and listening at the center of conducting research. Central to Indigenous methodologies is the idea that “relationships are dialogical” (Hill & Coleman, 2018, p. 2). By this, Hill and Coleman explain that “the Two Row tradition depicts a relationship that is explicitly dialogical rather than monological” (p. 7). Dialogical suggests a conversation between two or more parties and favors multivocality over univocality (Dragga & Gong, 2014). Moore (2017) emphasizes the importance of both speaking *and* listening during dialogic practices. Morman (2018) suggests that dialogue, or what he terms *robust consultation*, requires parties that are interested in overcoming ignorance and finding common ground. And Grossman’s (2005) work shows the validity of this approach. In his research, he observes that conflict declines when rural whites and Native Americans initiate dialogue toward collaboration to protect community livelihoods and natural resources. Getting groups to talk together in positive ways is critical and requires the willingness to overlook past grudges and misunderstandings from both parties.

My research project engages a storytelling methodology. Smith (2012) acknowledges that storytelling has “become an integral part of all indigenous research” (p. 145). Other researchers have studied storytelling and recognize its value in rhetoric and Indigenous research, as well (Baake & Montgomery, 2017; Corntassel, 2009; Legg & Sullivan, 2018; Powell, 2014; Small, 2017). At its basic level, storytelling is dialogic and requires a storyteller as well as a story listener (Behar, 1996). For Behar, the storyteller is the person who tells stories, and the researcher is the story listener, the person who gathers the stories. For Wilson (2008), however, the researcher/author takes the role of storyteller and the audience takes the role of listener. Armstrong offers another perspective. She states:

Through my language I understand I am being spoken to, I’m not the one speaking. The words are coming from many tongues and mouths of Okanagan people and the land around them. I am a listener to the language’s stories, and when my words form I am merely retelling the same stories in different patterns. (cited in King, 2005, p. 2)

Similarly, Wilson (2008) classifies Indigenous stories into three categories: sacred stories, Indigenous legends, and personal experiences. According to Wilson, sacred stories are always told the same way and can only be told by those who have permission to do so. Indigenous legends are stories with morals or lessons learned and are often shaped according to the individual experiences of the storyteller. Personal experiences, Wilson says, are just that, they relate “personal experiences or the experiences of other people” (p. 98) and represent the types of stories I looked for as I conducted my research.

Methods

My methodologies inform my methods, which are antenarrative analysis and listening. I include two of Boje’s (2001) five dimensions of antenarrative analysis—*plurivocal interpretations* and *collective memories still in flux*. Boje explains:

Storytelling organizations are antenarrative, existing to tell their collective stories, to live out their collective stories, to be in constant struggle over getting the stories of insiders and outsiders straight. It is a sensemaking that is coming into

being, but not finished or concluded, in narrative retrospection. (p. 4)

The Standing Rock Sioux Tribe is one example of a storytelling organization that exists, in part, to tell their collective stories. Dominant narratives are an essential part of antenarrative analysis as they offer a contextualizing backdrop for the juxtaposition of resistance done by counter narratives in a case (Boje, 2001). Using ATLAS.ti in tandem with an inclusion criterion, I determined which of the 63 documents I started with fit within the scope of my study. Those that did were divided into one of two groups, dominant narrative documents or counter narrative documents. I

used the “project” function in ATLAS.ti to house and organize these narrative document groups. Using an inclusion criterion, I selected documents that composed the DAPL dominant narrative. My inclusion criterion looked for documents that met at least one or more of the following criteria:

- Public facing documents that tell a version of the story intended for public audiences
- Correspondence from principal pro-pipeline actors and U.S. Government officials in the DAPL drama
- Official documentation that summarizes decisions made regarding the design, construction, and operation of DAPL

Table 1. Dominant Narrative Corpus

Document, Author, Date Published	Description of Document
<i>Energy Transfer Announces Crude Oil Pipeline Project</i> , Energy Transfer, 2014	Energy Transfer press release announcing the Dakota Access Pipeline project
<i>Dakota Access Pipeline</i> , Energy Transfer, 2014	Energy Transfer's website dedicated to educating the public on the Dakota Access Pipeline and dispelling misinformation by clarifying the facts
<i>Memorandum: DAPL—Route Comparison and Environmental Justice Considerations</i> , Siguaw and Rowe, 2016	Memo defending pipeline routing decisions and work to counter the Standing Rock Sioux Tribe's environmental justice claims
<i>Mitigated Findings of No Significant Impact: Environmental Assessment Dakota Access Pipeline Project</i> , U.S. Army Corps of Engineers, 2016	Environmental assessment report concluding that DAPL will have no adverse impact on wildlife, that historic properties would not be affected by the pipeline, and that any impacts to the environment would be insignificant
<i>Energy Transfer Partners Memo: Dakota Access Pipeline Project Update</i> , Warren, 2016	Memo by Kelcy Warren to partnership employees the good work Energy Transfer is doing in helping to build U.S. Infrastructure. The memo works to counter the “misinformation” dominating the current news cycle brought on by SRST's prayer camps and counternarrative.
<i>Letter to Dave Archambault II, Kelcy Warren, and Joey Mahmoud</i> , Darcy, 2016	Letter inviting the Standing Rock Sioux Tribe to discuss mitigation strategies in the event of an oil spill on Lake Oahe and pipeline easement concerns
<i>Memorandum for Commander, U.S. Army Corps of Engineers: Proposed Dakota Access Pipeline Crossing at Lake Oahe, North Dakota</i> , Darcy, 2016	Memo summarizing DAPL timeline including key events and meetings from July 25, 2016 through December 4, 2016. Memo concludes with a decision that the U.S. Army “will not grant an easement to cross Lake Oahe at the proposed location” until more analysis is conducted and an EIS is prepared (p. 3).
<i>ETP and Sunoco Respond to Statement from Dept. of Army</i> , Energy Transfer, 2016	Response to Darcy's December 4, 2016 memo announcing that a pipeline easement north of Lake Oahe would not be granted at that time
<i>Memorandum for the Secretary of the Army: Construction of the Dakota Access Pipeline</i> , Trump, 2017	Trump Administration directing the U.S. Army Corps of Engineers to approve the construction and operation of DAPL and to grant necessary easements to complete the project
<i>ETP Announces Bakken Pipeline is in Service</i> , Energy Transfer, 2017	Press release announcing that the pipeline is operational and transports 520,000 barrels per day with a potential to transport 570,000 barrels. Reiterates how pipelines transport oil in safe and environmentally responsible ways.

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- Documentation establishing a timeline, from start to finish, of the project

With these criteria in mind, I selected ten documents that fit this inclusion criterion and were representative of the overall DAPL dominant narrative (see Table 1).

In total, 10 documents of the original 63 made up the DAPL dominant narrative corpus. I used ATLAS.ti to conduct two cycles of coding; the first had nearly four dozen codes; the second narrowed it to six, which included Colonialism, Compliance, Disem-/Empowers Indigenous, Justice, Rhetoric, and Risk. Of these six groups, two emerged as the most dominant in the corpus—colonialism and risk. The colonial stories in the dominant narrative corpus include accounts tied to ownership and colonial interpretations of sacred sites. The risk stories largely focus on acceptable risk to the environment and using linguistic strategies to minimize risk.

Much like I did with the dominant narrative, I used an inclusion criterion to help me select documents and stories that would constitute my counter NoDAPL narrative corpus. The criteria that I used to create this corpus included:

- Document helps frame the main topic, including oil, environmental issues, and colonialism.
- Document was written during the Dakota Access Pipeline timeline.
- Document was written by Indigenous authors.
- Document was written about DAPL at the request of Indigenous people or groups.
- Document describes the three main Standing Rock Sioux Tribe prayer camps.

In total, 18 documents of the original 63 constituted the counter narrative corpus (see Table 2).

The documents selected for inclusion in the NoDAPL counter narrative corpus met at least one criterion with the majority meeting two or three. While my treatment of the dominant narrative followed a more Western approach to research (in that I started with a corpora of documents, subjected them to a coding process, and then analyzed the codes looking for trends), my treatment of the counter narrative followed an Indigenous approach that relied on the Indigenous methodologies of storytelling, building relationships, and listening (King, 2005; Legg & Sullivan, 2018; Lewis, 2018; Smith, 2012; Wilson, 2008) to understand the counter narrative corpus. Using storytelling as a methodology required me to

listen for stories rather than listen to stories. From a methods perspective, listening to a corpus of documents meant that I read and re-read the documents trying to understand their points of view and perspectives, but also looking for places where knowledge making was happening. In doing this work and going through this listening process, I observed a spirit of cooperation and resilience in the corpus. My use of listening as a research method is most often associated with ethnographic fieldwork and research involving participant interviews (Ratnam, 2019; Tracy, 2013), but I used it here to listen to the stories of Indigenous water protectors found in documents related to the NoDAPL case. While I did not interview participants in this research project, I applied some of Kvale's interviewer criteria while engaging with the documents I studied. Kvale suggests that good interviewers are open-minded, probing (i.e., they don't take "everything at face value, but rather ask critical questions about inconsistencies"), and attentive, meaning they supportively listen (cited in Tracy, 2013, p. 161). I treated the documents I studied as I would participants had I done interviews. Additionally, Cruikshank's (2005) distinction between listening *for* stories as opposed to simply listening to stories was groundbreaking for my research. This important distinction moved me, as a technical communication researcher, from the role of a passive listener to an active listener determined to honor the relationships important to counter stories. By actively listening for stories rather than passively listening to them, I discovered three approaches to understanding relationships among stories. These three approaches are discussed in the next section.

FINDINGS AND DISCUSSION

When I started this research project, I hoped to discover ways to amplify Indigenous voices to better care for the environment. I hoped to draw tidy conclusions that answered my research questions. I found the opposite to be true: research that works to amplify Indigenous voices does not surrender answers to complex questions so easily. Instead, I am left with a problem that highlights the messiness of stories and storytelling, a problem that is consistent with antenarrative that describes stories as fragmented, chaotic, and always in flux (Boje, 2001; Jones, Moore, & Walton, 2016). Many people see stories and

Table 2. Counter Narrative Corpus

Document, Author, Date Published	Description of Document
<i>Just Oil? The Distribution of Environmental and Social Impacts of Oil Production and Consumption</i> , O'Rourke and Connolly, 2003	Describes the impacts of oil production, distribution, and consumption globally. Focuses on how the distribution of oil inequitably affects different ethnic groups, communities, and the environment.
<i>"But I Know It's True,"</i> Checker, 2007	Examines how environmental risk assessments exclude marginalized populations
<i>Declaring War on KXL</i> , Estes, 2014	Explains how pipelines leak, trespass on ancestral lands, and disturb sacred sites
<i>Preface and Introduction of Wastelanding</i> , Voyles, 2015	Introduces the term <i>wastelanding</i> —rendering pollutable/marginal/unimportant the lives, lands, cultures, and ways of knowing of Indigenous people
<i>Photos: A Visit to the Standing Rock Pipeline Protest Camp in North Dakota</i> , Brandon, 2016	Offers a look inside the Oceti Sakowin prayer camp during the Standing Rock/DAPL standoff
<i>From 280 Tribes, a Protest on the Plains</i> , Healy, 2016	Offers a look inside the Sacred Stone prayer camp during the Standing Rock/DAPL standoff
<i>Native American Activist Winona LaDuke at Standing Rock</i> , LaDuke, 2016	Offers a water protector's perspective during the Standing Rock/DAPL standoff
<i>The Misery of Settler Colonialism</i> , Simpson, 2016	Discusses settler colonialism within the context of building movements that amplify Indigenous political efforts and reject colonized attempts to erase Indigenous people from the land
<i>We Need to be Talking About Standing Rock</i> , Laurel, 2016	Discusses the injustices wrought upon Indigenous people by the United States. Emphasizes the importance of clean drinking water and the reality that pipelines leak.
<i>30 Years of Oil and Gas Pipeline Accidents, Mapped</i> , Joseph, 2016	Details pipeline accidents in the United States between 1986 and 2016
<i>We Are Our Own Medicine</i> , Goens-Bradley et al., 2016	Chronicles the events in Standing Rock prayer camps during the DAPL standoff
<i>Why the Founder of Standing Rock Sioux Camp Can't Forget the Whitestone Massacre</i> , Allard, 2016	Offers historical parallels between the Whitestone Massacre of 1863 and DAPL injustices
<i>Technical Engineering and Safety Assessment: Routing, Construction, and Operation of the Dakota Access Pipeline in North Dakota</i> , Bekar et al., 2017	Technical assessment challenging some conclusions drawn by USACE, including the decision to use horizontal directional drilling under Lake Oahe, the failure to consider other alternative routes, and the failure to acknowledge how often pipelines leak
<i>Cover Letter to Ms. Tracey Zephier</i> , Martin, 2017	Summarizes key findings in the Envy DAPL assessment
<i>Red Warrior Camp Speaks</i> , Red Warrior Camp, 2017	Seeks to dispel myths propagated by TigerSwan, ETP's security contractor during the DAPL standoff
<i>Oil Protectors vs. Water Protectors</i> , Kills Pretty Enemy, 2017	Depicts the battle between the DAPL oil protectors and the Standing Rock Sioux Tribe water protectors
<i>Impacts from an Oil Spill from the Dakota Access Pipeline on the Standing Rock Sioux Tribe</i> , Standing Rock Sioux Tribe, 2018	Identifies effects an oil spill would have on fish, wildlife, wetlands, and the Standing Rock Sioux Tribe. Discusses economic impacts of DAPL on the Standing Rock Sioux Tribe.
<i>"They Took Our Footprint Out of the Ground" An Interview with LaDonna Bravebull Allard</i> , Estes, 2019	Tells stories that provide an Indigenous history of the place where DAPL crosses the Missouri River

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storytelling as straightforward constructs that at their most rudimentary level include a beginning, a middle, and an ending that brings a satisfying close to the story (Schoen, 2000). When stories are approached from a relational way, however, complexity replaces simplicity, and the volume of counter narratives is turned up to what amounts to a greater amplification of their voices.

I offer three different approaches to understanding the relationships among stories. In discussing these approaches, I rely on graphics to illustrate them as visuals have the power to communicate certain concepts more efficiently than text alone. Additionally, my graphics (Table 3 and Figures 1-3) offer visual heuristics for researchers and practitioners looking for ways to apply this research. The first of the three approaches is the dominant narrative versus counter narrative, the second is the layered narrative, and the third is a community of stories (see Table 3).

Each of these three approaches offers an increasingly complex way of thinking about stories and storytelling, the relationships between power, and which stories are amplified and which ones are not. In the dominant versus counter narrative approach, the one-dimensional dominant narrative is confrontational, has all the power, and amplifies its own narrative while subjugating and muting counter narratives. A layered narrative approach builds on work done by Boje (2001) who advocates for positioning local stories “side by side with corporate and great-CEO narratives” (p. 55). His work stresses the importance of multiple narratives using microstoria or a layered narrative approach. In the layered approach,

power is distributed across a multi-dimensional metanarrative that attempts to equalize power and story amplification among dominant and counter narratives. A community of stories approach takes the layered approach a step further. It isn’t just that there are multiple layers or a collection of poly-phonic voices in the narrative, but that the stories work together to form a community of stories that shift the focus away from power and toward honoring the stories important to a given community. When stories are approached relationally, technical communication scholars and practitioners not only think about stories in different, more complex ways, but they position stories to better understand any given case or situation. By realizing that stories belong to communities and are more than just linguistic tools, technical communicators are better positioned to enter into cooperative relationships that allow them to honor Other voices, including those belonging to humanity’s human and other-than-human relatives (e.g., plants, animals, wind, water, and earth). It is then that we can begin to solve problems where communities of stories live. Looking forward, the remainder of this section discusses these three approaches to story relationships in greater detail.

Dominant Narratives, Layered Narratives, and Communities of Stories

The DAPL dominant narrative subjugated and marginalized the counter narratives belonging to the Standing Rock Sioux Tribe by presenting one-sided viewpoints characterized by biased perspectives of “facts”

Table 3. Three Approaches to Understanding Relationships Among Stories

	Locus of Power	Dimensionality	Amplification of Counter Narrative	Foundational Texts
Dominant Narrative versus Counter Narrative	Dominant narrative subjugates counter narratives	One-dimensional	Muted	Wolfe (1999) LaDuke (2005) Dragga & Gong (2014)
Layered Narratives	Equalized among dominant and counter narratives	Multi-dimensional	Equalized with dominant narrative	Boje (2001) N. N. Jones (2016) Morman (2018)
Community of Stories	Focus on honoring stories not on dominating stories	Multi-dimensional	Amplified	Cruikshank (2005) Wilson (2008) Wildcat (2009) Hill & Coleman (2018) Legg & Sullivan (2018)

and “truth.” Conversely, the counter narratives told the stories of “those who fell outside of the powerful majority” (Wilson, 2008, p. 35), they focused on local stories and local ways of knowing (Boje, 2001), and because they were told by multiple storytellers they were multi-dimensional or poly-phonic (Jones et al., 2016). This section reviews three approaches for understanding the relationships among stories in the NoDAPL movement—dominant versus counter narratives, layered narratives, and community of stories. Additionally, I identify how these approaches work to amplify Indigenous voices in the counter narratives.

Dominant Narrative Versus Counter Narrative Approach

Settler colonialism, at its core, seeks to displace Indigenous people from the land. According to Wolfe (1999), the colonizers’ invasion “is a structure not an event” (p. 2) that is marked by the acts of eliminating and replacing Indigenous people from the land. This work of displacement and replacement has happened and continues to happen on multiple levels, including the physical separation of Indigenous people from the land (e.g., Trail of Tears, the Long Walk, reservation systems, the Termination Policy of 1953, and utility easements); from their culture (e.g., Indian boarding schools); and from their lives (e.g., missing and

murdered Indigenous women (MMIW)). I also saw evidence of displacement and replacement in the dominant narrative that looked to discredit Indigenous counter narratives tied to the DAPL case and replace them with the dominant narrative’s version of the facts. The DAPL dominant narrative imposed an ‘us versus them’ binary that forced the public to take sides in the oil transportation debate rather than cooperatively generate solutions of how to transport oil more safely. Instead, Energy Transfer Partners (ETP) pushed a colonial narrative that ignored claims by the Standing Rock Sioux Tribe that DAPL jeopardized sacred sites and threatened water supplies. Furthermore, ETP attempted to define acceptable risk for the Standing Rock Sioux Tribe and minimized the risk of oil pipelines by expertly employing linguistic moves and rhetorical strategies to craft what was intended to be a convincing argument that pipelines don’t leak and that pipelines represent an environmentally responsible method for transporting oil. For ETP, a single narrative was key in garnering much needed support from the U.S. Army Corps of Engineers to secure the Lake Oahe utility easement. Left unchecked by those who hold power, dominant narratives have the ability to delegitimize, erase, and replace counter narratives, much like what happened during the NoDAPL movement (see Figure 1).



Dominant narratives **delegitimize** counter narratives by labeling them as false, irrational, unlikely, and wrong.

Those who hold power use dominant narratives to encroach on, dispossess, and **erase** counter narratives.

Dominant narratives **replace** counter narratives with the dominant group’s version of truth and reality.

Figure 1. How Dominant Narratives Delegitimize, Erase, and Replace Counter Narratives

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In this approach, counter narratives are hidden behind a wall of power and/or authority that works to delegitimize, erase, and replace them with dominate narratives. In the DAPL narrative, dominant-driven approaches worked to reinforce a one-dimensional regime of truth that accepted the dominant version of the narrative and rejected counter narratives. One of the purposes of the dominant narrative is to convince the public not to worry about a particular project. With the Dakota Access Pipeline, the problems and concerns voiced by the Standing Rock Sioux Tribe were repeatedly delegitimized, erased, and replaced with contradictory narratives that simply ignored and distracted the public from real problems. These acts of concealing problems are no different than infrastructures, like pipelines, that are camouflaged or made to appear invisible (Boje, 2001; Peters, 2015). In this case, however, instead of hiding a nearly 1200-mile crude oil pipeline by burying it in the ground, the arguments against the pipeline were delegitimized by labeling them as false, irrational, unlikely, and wrong. As a result, the “us versus them” binary further marginalized voices not aligned with the dominant narrative. In the DAPL dominant narrative, this dominant-influenced binary was strategically employed to discredit and disprove the Standing Rock Sioux Tribe’s counter narrative. The result, at least in the case of the Dakota Access Pipeline narrative, was

a skewed description that amplified the dominant narrative and muted the counter stories that aligned with the viewpoints of the Standing Rock Sioux Tribe.

Understanding Metanarratives with a Layered Narrative Approach

The dominant DAPL narrative offers a contextual backdrop for the NoDAPL counter narrative. I considered the dominant and counter narratives together in this research project to avoid misrepresenting the metanarrative, or overarching narrative. Rather than viewing the dominant/counter narrative construct as an either-or binary that ignores the different ideological frames and epistemological assumptions of the Other, it is helpful to consider the metanarrative (dominant and counter narratives together) using a layered approach. Whereas the one-dimensional dominant narrative quiets dissimilar voices, a layered narrative attempts to equalize the amplification of voices of both dominant and counter narratives to avoid distorting and even trivializing the metanarrative (Boje, 2001). A layered approach to story-based research socially constructs a corpus of stories where each story forms a layer in the metanarrative. I refer to Nakanishi’s (n.d.) Layer Drawings to help explain what this layered story approach might look like (see Figure 2).



Figure 2. Nobuhiro Nakanishi's Layer Drawing "Light of the Forest" (Used with permission from © Nobuhiro Nakanishi, Courtesy of Yumiko Chiba Associates)

To compose his Layer Drawings, Nakanishi prints different photographic images on transparent acrylic panels that when viewed from a stacked orientation reveal a multi-dimensional visual composition rich with details unachievable with one-dimensional art. Although none of the images on the individual acrylic panels are the same, the images work together to achieve a stunning composition that captures layers of time spread out across a longer, historically complex narrative.

From Boje (2001), I borrow the term *poly-phonic stories*, which correlates with Morman's (2018) use of the term *plurinational society*. Taken literally, polyphonic stories represent narratives from many voices or positions of power, including dominant and counter narratives. The term *plurinational society* is defined as the existence of more than one national group within an organized community. Put another way, the fifty states making up the United States of America represent just one national group in the greater American community. An additional 574 federally recognized Indigenous nations in the United States contribute to the plurinational society in which every citizen of the United States resides, which means there are many different governments, cultures, languages, ways of knowing, and ways of believing inside the United States of America (Morman, 2018). When poly-phonic stories are layered over the top of a plurinational society, a chorus of voices emerges that can help technical communication scholars and practitioners prioritize, learn from, value, and amplify counter stories tied to specific narratives like the ones belonging to the Dakota Access Pipeline.

The layered narrative and my use of Nakanishi's Layered Drawings are not without their flaws or shortcomings. First, as with anything that is layered, whether it be a composite material, graffiti palimpsests (Myllylä, 2018), or sound, there are facing or exterior layers (the first layer of a thing that the audience sees, hears, or experiences) and middle layers (the layers between the facing layers). The facing layers of a story (most often the dominant narrative) have the potential and power to disproportionately influence the metanarrative while the middle layers (most often the counter narratives) might be more easily lost behind the facing layers. Second, all of the layers (facing and middle) risk homogenization. Wildcat (2009) warns that "the situation we currently face has

been brought about in large part by the globalization of a homogenizing one-size-fits-all culture" (p. 39). Although Nakanishi's layer drawings utilize panels of the same size, shape, and color scheme, I refer to his work simply as a visual example of the mechanics and utility of the layered narrative. I do not advocate for homogenization in storytelling; rather, I see story layers as a series of living, breathing stories that have lessons to share, perspectives to see, and knowledges to make. When treated this way, layered narratives have the power to amplify marginalized and muted voices. Third, the layered narrative could be misunderstood as a static model that permanently fixes stories as either facing or middle layers. Unlike layer drawings, layered narratives are always in flux. In other words, stories are not locked into a facing or middle layer position, but shift depending on a narrative's strength at different points in time. Different points of view and/or perspectives allow layered narratives to shift as well. Similarly, Jones (2016) observed the dynamic nature of stories and shifting points of view in her genre narrative work. She acknowledges that when researchers focus exclusively on just one thing or one story, other perspectives and stories are lost. Instead, Jones advocates for a more balanced approach to "better understand the impact of stories on participants' work and lives" (p. 316).

I observed evidence of the layered narrative in the "I Stand with Standing Rock" narrative. When Energy Transfer Partners first announced the pipeline, they controlled the narrative, and their story became the facing layer. As the Standing Rock Sioux Tribe joined the narrative with their NoDAPL movement, their voices and stories became middle layers that added to the narrative's composition. For months, their stories remained in those middle layers. However, on September 3, 2016, violence erupted while water protectors blocked construction efforts of the pipeline. In response, Tiger Swan (Energy Transfer Partner's hired security firm) used pepper spray and attack dogs to push the water protectors back. As a result of the attack, almost three dozen water protectors sustained mace-related and dog bite injuries (Gilio-Whitaker, 2019). After video, photos, and storied accounts of the attack went viral on social media, those with access to digital technologies could no longer ignore the events at Standing Rock, nor the injustices exacted on the movement's water protectors who had reportedly been engaged in peaceful civil disobedience. After the

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September 3 confrontation, Standing Rock received increased media attention from both mainstream and alternative news outlets. The public flooded social media with Standing Rock stories and temporary profile pictures that proclaimed, “I Stand with Standing Rock.” During this time of increased attention to the Standing Rock Sioux Tribe’s fight against DAPL, the “I Stand with Standing Rock” narrative shifted from the middle layers of the narrative to the facing layers. The NoDAPL narrative remained in that position through the end of the year, gathering increased momentum from social media and from Jo-Ellen Darcy’s December 4, 2016 memorandum that directed the U.S. Army Corps of Engineers to prepare an Environmental Impact Statement (EIS) for the pipeline’s proposed Missouri River crossing. The facing layer shifted again with President Trump’s January 24, 2017 Executive Order that expedited environmental reviews for high priority infrastructure projects. That executive order was followed with a memorandum from President Trump to the Secretary of the Army that instructed the Secretary to rescind the EIS and issue the easement required to complete the Dakota Access Pipeline. In the layered narrative approach, I observed that amplification allows for the re-layering of stories, which has the effect of momentarily amplifying certain stories over others. While a story’s position in the layered narrative does play a role in the tenor of the overall narrative, the power of an individual story depends largely on who is listening and less on the dominant players’ ability to censor counter narratives.

A Community of Stories

The layered narrative approach shows how dominant and counter narratives can co-exist in contiguous rhetorical spaces; however, the ability to co-exist is not enough. When counter narratives exist side-by-side with more powerful dominant narratives, the amplification of voices doesn’t generally happen simply because counter narratives don’t have the weight of political power to amplify their voices loud enough to change the ending of the story (Jones et al., 2016). In the DAPL metanarrative, the dominant narrative was too loud, it had too much political and economic power behind it, creating a pair of mismatched contenders that all but ensured ETP’s victory. Collins (2019) explains:

In a David and Goliath world regulated by dominant Western epistemologies . . . intersectionality cannot

simply assume that it is playing by the same set of rules as everyone else. Critical theoretical projects resist and criticize not just the intellectual and political arrangements that accompany specific forms of domination, but also how dominant epistemologies make these structures of knowledge notoriously difficult to upend. (p. 152)

Though Collins’s work focuses on intersectionality, the same is true for decolonizing methodologies that seek to amplify counter narratives. On their own, however, the layered narrative approach cannot get this work done alone. Still, the work of layering narratives is important because it removes the wall of power that looks to hide counter narratives.

Building off the work done by layered narratives, communities of stories (CoS) demonstrate how stories can move away from attempts to equalize stories and to instead focus on amplifying their collective voices. The community of stories approach offers a methodological basis for TCR professionals to more fully engage with a given narrative by considering the ideological frames and epistemological assumptions of the different voices represented by the metanarrative (e.g., how nature is defined, how knowledge gets made, how land exists, and whether or not land can be owned). In the DAPL case, these frames and assumptions were ignored by the dominant versus counter narrative approach, which became problematic when the focus shifted to solving problems.

Because so much of the NoDAPL counter narrative was delegitimized, erased, and replaced by the dominant narrative, the problems voiced by the Standing Rock Sioux Tribe remained unsolved. The community of stories that I focused on in this research project invited me, a technical communication researcher, to consider the long history Indigenous people have with the land, the water, and settler colonial frameworks. Whereas the dominant narrative ignored and hid the problems introduced by DAPL, the Standing Rock Sioux Tribe’s community of stories worked to solve problems and positioned stories as problem solving strategies. For example, during the time of increased media attention following the September 3 incident (discussed in the previous section), social media became the primary outlet for getting information distributed to the general public—a move that temporarily amplified Indigenous voices determined to have their messages and grievances heard. Grinnell explains that “we know

how to get information out there, and we are spreading it through social media" (cited in Estes & Dhillon, 2019, p. 22). Rather than rely on news outlets to shine a light on the Standing Rock story, social media and the subsequent momentum gathered through viral posts gave the power to tell stories to those outside the dominant narrative. The September 3 incident is an apt example that illustrates the power of social media in drawing attention to a particular movement or cause. But the excitement surrounding viral posts can fade if the momentum from hyped media attention is not leveraged. For many Indigenous people, the "I Stand with Standing Rock" movement was the catalytic megaphone that inspired other Indigenous organizers (e.g., PANDOS, SLC Air Protectors, Stop Line 3, Native Organizers Alliance, Indigenous Cultures, and Utah Diné Bikéyah) to amplify other environmental stories sacred to Indigenous people. These stories continue to be told because of what happened at Standing Rock. Le Blanc (2021) explains that "Standing Rock was the beginning, not the end. Standing Rock is everywhere. And our people aren't going to back down from protecting and shaping the future of the land, air, and water for all people, Native and non-Native."

In addition to social media strategies, Indigenous water protectors have long used litigation as another strategy for amplifying their voices. During the construction of DAPL, the Standing Rock Sioux Tribe repeatedly turned to the courts hoping that the legal system would halt construction of the pipeline in order to stop the desecration of their lands, waterways, and sacred places. Some of these efforts had the effect of temporarily pausing the project, but invariably the pipeline project continued to advance toward completion. A decision from a United States District judge agreed that the Standing Rock Sioux Tribe's fears and concerns have merit. On March 25, 2020, Judge Boasberg ordered the U.S. Army Corps of Engineers to prepare an Environmental Impact Statement for the pipeline. In his decision, he cited a number of factors that the Corps overlooked, including the effectiveness of DAPL's leak detection system; an insufficient and incomplete discussion of ETP's and Sunoco's pipeline operator safety records (described as poor in the industry); failure to consider the impact of harsh North Dakota winter conditions in the event of a spill; and overly optimistic and deficient data for worst-case

discharge including leak-detection time, shutdown time, and adverse conditions (Boasberg, 2020).

Social media and litigation represent just two ways the Standing Rock Sioux Tribe's community of stories worked to solve problems and positioned stories as problem solving strategies. To help visualize what a community of stories looks like, I offer a CoS graphic inspired by Indigenous hoop dancers (see Figure 3).



Figure 3. Community of Stories Narratives

In Indigenous hoop dances, the hoop has different symbolic meanings for different tribes and different dancers who practice this form of ceremonial dance. At a basic level, the hoop symbolizes the never-ending circle of life that reminds dancers and audiences that humans and other-than-human relatives are all connected. Joe Luna explains that the hoop "represents the circle of life with no beginning and no ending. The dancer begins with one hoop and keeps adding and weaving the hoops into formations that represent the journey through life. Each added hoop represents another thread in the web of life" (cited in Hines, 2015). The practice of hoop dancing transforms the dancer into a storyteller who, through dance, tells an evolution of stories. In hoop dancing, the story changes as hoops are added and arranged into different formations. Each hoop is distinct and tells a different part of the story. There are three ways that hoop dancing and Indigenous communities of stories parallel each other, thus reinforcing the hoop dancing metaphor. First, their purpose and function are similar. Second, they are fundamentally fluid. And third, they are relational.

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First, just as the dancer adds and rearranges hoops to tell different stories, a community of stories approach uses different voices and stories that overlap (are layered), intersect, move, and evolve (especially over time) to amplify counter narratives. The circles represent different stories in the narrative and allow stories to be added, removed, and rearranged into different formations. Not only does the material act of adding hoops correlate with the community of stories approach, but the origins of hoop dancing reinforce the appropriateness of the metaphor. Arcand (2014) explains that hoop dancing was originally done as a ceremony, a prayer to help restore harmony and balance in the world. It is precisely this idea of restoring balance and harmony in the world that NoDAPL water protectors were after. The diverse formations that CoS narratives form can help technical communicators better understand both the complexity of counter narratives and a path forward toward problem resolution.

Second, hoop dancing and communities of stories are fundamentally fluid. Arcand (2014) explains that during a performance, hoop dancing “continuously flows and continuously grows.” Similarly, in a community of stories approach, stories continuously flow and grow as the priority is on listening for stories rather than simply listening to them. Listening for stories allows stories within counter narratives to evolve and join together, which can amplify and lend strength to stories that would be weaker on their own.

Third, like hoop dancing, the CoS approach is relational, which allows stories to coalesce into a community of stories that lends their combined voices strength, relevance, and amplification. When organized as communities, stories not only have the ability to rupture dominating dominant narratives and to soften their power, but also have the strength to solve problems in cooperative ways. For communities of stories to be effective, however, audiences must listen to their collective voices. Without listening, the power to amplify stories is lost and can only be recovered when audiences are again ready to pay attention and listen. When technical communicators and others listen for stories in counter narratives, a series of relational stories emerge that allow for the amplification of voices.

CONCLUSIONS AND TAKEAWAYS

Despite the decades long relationship technical communicators have had with environmental documentation and risk communication, only recently has the field committed itself to engaging in socially just practices from a decolonial and/or Indigenous framework (Agboka, 2013; Haas, 2012; Walton, Moore, & Jones, 2019). It is from this area of social justice and Indigenous frameworks that a rich tapestry of voices can emerge that will not only positively impact environmental policy affecting Indigenous peoples but might potentially effect environmental change for all peoples.

In this research project, listening to the NoDAPL movement’s collective voices as a community of stories was instrumental in helping me to first, understand the counter narrative and the Standing Rock Sioux Tribe’s opposition to the Dakota Access Pipeline; and second, to see a potential path forward for solving the problems introduced by the pipeline. Had I only relied on the dominant narrative’s version of DAPL events, my understanding of the metanarrative would have been grossly incomplete. The same holds true, really, for any narrative and any story that positions, and subsequently amplifies, certain voices over others. Furthermore, I would have never encountered the Standing Rock Sioux Tribe’s community of stories that taught me how to listen and how to amplify counter narratives.

Decolonized storytelling methodologies and communities of stories can play important roles in helping technical communicators to understand the contributing narratives of any case. As technical communication scholars and practitioners, there is not a case in the world that is not flanked by dominant and counter narratives—all cases have a dominant narrative and layers of counter narratives. This presents an important opportunity for TCR teachers and practitioners to do the critical work that communities of stories demand. In other words, there is never just a single story that represents a given case, which opens up opportunities for technical communication scholars and practitioners to look for, excavate, and amplify subordinated counter narratives. Additionally, in learning to do this work, TCR scholars owe it to their students to teach them how to not only do this work of listening and discovery, but to prioritize it in their future careers. In failing to do this work,

technical communicators may end up reinforcing and validating harmful dominating dominant narratives that exacerbate and hide problems rather than working to understand and solve them.

In conducting this research, there are at least four takeaways that are important for both researchers and practitioners. First, working with Indigenous populations requires a different approach and should privilege storytelling. Second, listening *for* stories as opposed to simply listening *to* stories has the potential to move technical communication researchers from the role of a passive listener to the role of an active listener. Third, the layered narrative approach shows how dominant and counter narratives can co-exist in contiguous rhetorical spaces; however, the ability to co-exist is not enough. And fourth, in a community of stories approach, stories work together to shift the focus away from power and toward honoring the stories important to a given community.

LIMITATIONS AND FUTURE RESEARCH

In reflecting on the limitations of this project, I focus on bias and the corpus of documents I analyzed for both the dominant and counter narratives. First, the personal baggage I collected over my lifetime has inevitably colored how I analyzed and interpreted this data. By default, bias is a limitation of any qualitative research project. However, these same experiences and points of view can also be considered strengths in the research process as they can offer a greater breadth of understanding in certain situations. Being aware of my biases (especially as a non-Indigenous researcher researching an Indigenous topic), however, has helped me to be a more careful and thoughtful researcher.

Second, my study is limited by my selection of the documents I chose to include in the dominant and counter narrative corpora. To date, there are thousands of documents that describe the DAPL case. The Standing Rock Syllabus, alone, is 2,403 pages. Additionally, there are countless articles, news reports, artwork, legal documents, memos, letters, and reports dedicated to the Dakota Access Pipeline case. The dominant narrative corpus that I studied included just 10 of these documents while the counter narrative corpus included 18. Though I worked hard to eliminate my own bias in selecting these corpora for study, it is likely I did not eliminate all of it.

Given the enormity of the DAPL case and the increased acceptance of story-based research in the field of technical communication, there is a lot more work to be done with the NoDAPL narrative and other Indigenous environmental narratives that actively push against the colonial patriarchy of dominating dominant voices. Some of these Indigenous led counter narratives include the fight against Minnesota's Line 3, the 2015 Gold King Mine Spill, uranium mining and their impacts on Diné communities, and the threat of zombie pipelines (the old pipelines left behind by pipeline companies) across North America. Additionally, this work has implications and applications in similar areas of activism and scholarship, including Black Lives Matter, discussions surrounding MMIW (Murdered and Missing Indigenous Women), and the MeToo movement. Essentially, wherever patriarchal norms are allowed to dominate public narratives and silence counter narratives, there are opportunities to apply this work with communities of stories in order to amplify counter narratives as a way to solve problems.

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Experiencing a Global Pandemic: The Power of Public Storytelling as Antenarrative in Crisis Communication

By Sweta Baniya & Chen Chen

ABSTRACT

Purpose: This article explores the role of storytelling in public spaces during the global pandemic. We explore how storytelling can be used as a powerful medium of communicating crisis and addressing injustices during the pandemic.

Method: We conducted a rhetorical analysis of the digital stories, images, and podcasts from UnCoVer Initiative in China and Nepal PhotoProject in Nepal focusing on how these stories act as an antenarrative to the dominant pandemic narrative during a crisis.

Results: We found that both platforms acted as transnational and transcultural coalitional spaces, revealing and rejecting injustices through critical and reflexive storytelling, building collective knowledge on navigating the crisis, and developing solidarity through identification.

Conclusion: Storytelling can be used not only to communicate technical information about pandemics but also as a form of resistance to reveal, reject, and replace injustices that happen during a crisis.

KEYWORDS: Storytelling, Social Justice, Digital Platforms, non-Western, COVID-19 Crisis

Practitioner's Takeaway

- This study presents non-Western and intercultural, global knowledge-making practices during a global pandemic.
- Stories of activism, organizing from countries in the Global South, specifically in the case of complex problems and crises, can inform and push the field of technical communication towards more inclusive and multicultural practices.

INTRODUCTION

Storytelling helps us pass down the large and small instructions for living our daily lives as each generation passes their secrets, histories, and the “how-to” survival guide mostly through oral communication or stories. With the development of writing and various modes of digital communications, storytelling has captured and shared fleeting moments through digital devices and platforms. Scholars in technical communication have paid attention to the power of storytelling in professional contexts (Danner, 2020; Jones, 2017; Jones & Walton, 2018; McNely, 2017). During a crisis, storytelling can be used to provide more contextual information and navigate the crisis. Technical and professional communication (TPC) scholars have studied creative and subversive practices of communication during public health crises through digital platforms (Ding, 2014), in various entrepreneurial and community-based organizations, contexts (Jones, 2016, 2017), and storytelling as technical communication pedagogy (Moore, 2013). In transnational and transcultural contexts, such storytelling and curating also helps construct an “antenarrative” that can “recognize, reveal, and reject” various forms of oppression and replacing them with socially just practices that account for the complexities and nuances of global crises (Ding, 2014; Jones et al., 2016; Small, 2017; Walton et al., 2019).

In non-Western contexts like Nepal and China, the public and activists have collected and curated stories regarding the global pandemic on the web, notably in two examples: Nepal PhotoProject and UnCoVer Initiative. These platforms showcase the firsthand point of view of surviving through the global pandemic in China and Nepal with resistance, collaboration, and activism via persuasive and reflexive storytelling practices. Additionally, they constitute a powerful antenarrative that not only challenged traditional notions of technical communication by valuing experiential knowledge, but also helped provide spaces for coalition building to enact social justice.

The UnCoVer Initiative started as a response to Sinophobia by sharing stories of Chinese diaspora from their critical perspectives (both original and published elsewhere to be then translated and curated) on a website built by students from the New York University Shanghai campus. Nepal PhotoProject is an

Instagram account initiated in response to the April 2015 Nepal Earthquake. During COVID-19, the Nepal PhotoProject curated collaborative stories of various social activists by inviting storytellers to share their stories with the hashtag #nepalphotoproject and re-posting these crowdsourced stories. Additionally, the Nepal PhotoProject also provided fellowship to 15 visual storytellers across Nepal to document their experiences and stories in the early days of the pandemic. The stories in these two sites are crowdsourced and curated via a network of public storytellers spanning various contexts and countries, communicating information about the pandemic through personal experiences, and speaking about the effectiveness of governmental responses. This practice of storytelling coordinates both “persuasive and actionable goals” (Danner, 2020) that has helped people across national borders to navigate the pandemic and the heightened social, political, and economic injustices.

In this article, we examine how these two public oriented communication initiatives in non-Western context enact and expand the capacities of narratives in “fostering identification, facilitating reflexivity, interrogating historicity, and understanding context” of the global pandemic (Jones & Walton, 2018). They do so by creating a networked continuum via sharing stories that invite participants, environment, time, and place as active agents in the creation of ways of knowing, understanding, and relating (Legg & Sullivan, 2018). Based on our analysis of the two different digital spaces, we argue that activist work of public storytelling during crises in non-Western contexts can enact social justice through transnational and transcultural coalitional actions. In the following sections, we provide a brief literature review, followed by methods, our findings, and implications of this study.

LITERATURE REVIEW

The roles of technical communicators and activists during crises have been highlighted by scholars in the field of rhetoric, writing, and technical communication (Baniya & Potts, 2021; Ding, 2014; Frost, 2013). Grabill and Simmons (1998) have argued for a critical rhetorical approach to risk communication which critiques the one-way communication from experts or policymakers to the general public and instead, foregrounds power in risk assessment

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and communication processes. In turn, technical communicators serve as facilitators of increasing ethical public involvement. Attention to power dynamics in risk/crisis communication aligns with the social justice goals in the field. Here we use the definition of social justice proposed by Jones and Walton (2018) which focuses on “amplify[ing] the agency of oppressed people—those who are materially, socially, politically, and/or economically under-resourced. Key to this definition is a collaborative, respectful approach that moves past description and exploration of social justice issues to taking action to redress inequities” (p. 242).

Studies of grassroots communications as tactical communication during crisis/risk contexts, especially in non-Western contexts, have emphasized the complexities of transnational contexts, from political, social, and cultural perspectives and responded to various challenges with ingenuity in using digital technologies and civic networks to increase access to participation in decision-making and crisis response and intervention, if not as forms of resistance and activism (Ding & Zhang, 2010; Ding, 2012; Ding, Li & Haigler, 2015; Baniya, 2020). Additionally, in a very highly critical crisis like a global pandemic, global composition and technical communication (Gonzales, forthcoming; Rice & St. Amant, 2018) should attune to local and the global digital networks that offer more nuanced understandings of risk within the local communities.

To understand transnational spaces, we see how global forces create what Appadurai (2013) called “production of localities,” via circulation of information, messages, and collective challenges, where human beings exercise their social, technical, and imaginative capacities, including the capacity for violence, warfare, and ecological selfishness (p. 66). Therefore, Ding (2013) argued that transcultural connectivity can significantly impact transnational risk policies and that nations should not be treated as cultural monoliths. Ding’s framework of transcultural risk communication “[focuses] on the circulation and transformation of risk discourses across localities via communication technologies” and “examines the interactions and negotiations between localities and larger global processes, flows, and structures” (p. 129).

At the grassroots level, mediated by social, communal, and technological networks, transnational assemblages can be created in responding to disasters/

crises, by inviting more human and nonhuman actors to expand the response network and to enhance the rhetorical agency of often marginalized or oppressed populations (Baniya, 2020). Collective affect that gives rise to cyber-public activism in a transnational space is often characterized by nationalist sentiment, sense of belonging, diaspora, separation, marginalization, identity crisis, and insecurity (Wang, 2020). These affective emotions give rise to transnational assemblages, counter-public enclaves, and cyber-public activism that become a global force intervening into the systems of oppressions, injustices, and marginalization by using the power of narrative and storytelling in many spaces (Papacharissi, 2015).

Scholarship in technical communication has used the concept “antenarrative” to better interrogate and disrupt how dominant ideologies have shaped the field and to develop necessary steps toward social justice in both research and practice (Small, 2017; Jones, Moore, & Walton, 2016). Boje (2001) defined antenarrative as “fragmented, non-linear, incoherent, collective, unplotted, and improper storytelling.” This kind of storytelling “is constituted out of the flow of lived experience.” Narratives can help technical communicators “foster identification, facilitate reflexivity, interrogate historicity, and understand context” (Walton & Jones, 2017). In a crisis such as COVID-19, these capacities, enacted with affect, can contribute to activism that recognize, reveal, reject, and replace the system of oppressions via an intersectional coalitional approach that brings various forces and people together (Collins, 2019; Crenshaw, 2006; Walton et al., 2019).

Stories can transmit local experiential knowledge to inform the public and provide ways to navigate and survive a crisis. Stories can shape how people perceive events and make sense of the world during a crisis (Weick, 1995) and can function as an important tool for community organizers and activists (Stone et al., 2019). During the 2016 Flint Water Crisis, Moors (2019) found that activists used storytelling as a way to confront power structures to shed light on the health crisis through the global network of social media. During COVID-19, storytelling (i.e. diaries) has been used as civic communication practices that draw from lived experiences in the epicenter (Chen & Bergholm, 2020). When challenging power structures and advocating for marginalized communities,

storytelling practices can be seen as a kind of tactical communication practices, contributing to the antenarrative in a crisis context.

During a global pandemic, we must beware of the “outbreak narrative” that often leads to contradictions such as “the obsolescence and tenacity of borders, the attraction and threat of strangers, and especially the destructive and formative power of contagion” (Wald, 2008, p. 33). Oppression can happen during an outbreak when basic human rights are overshadowed by colonial, imperialistic, and nationalistic perspectives (Hesford, 2011). Across the globe we’ve seen sinophobic acts against Chinese or any Asian-looking people exemplified by terms “Wuhan virus,” “Kungfu virus,” and “China virus,” used even by nation leaders such as Donald Trump (Rogers et al., 2020). The heightened social stigma and discrimination connected to the disease against Asia diaspora in the west and African communities in China (Jia & Lu, 2021; Sastry & Zhou, 2020; Ng, 2020), caused by an “infodemic” with conspiracy theories, mixing facts, rumors, and fake news can influence policymaking about how to respond and address the disease locally (Sotgiu & Dobler, 2020).

Given this political and ideological context of the COVID-19, we especially want to focus on non-Western perspectives of storytelling because we want to enhance the field’s understanding of communication practices in non-Western contexts and to amplify non-Western perspectives (Mckoy, 2019). As argued by Baniya (forthcoming), non-Western ways of crisis management and communication are designed to challenge government norms and regulations and to offer alternative actions to better support transnational communities, considering both localization and internationalization of these communities (Agboka, 2013). As such, they often emphasize the values of community-based collective actions and communal, localized knowledge and foreground the needs of marginalized populations suffering in the process of disaster relief (Baniya, forthcoming).

These scholarly conversations are attuned to ways that oppressed or disadvantaged communities can work toward social justice goals during crises in ways that are collective and action oriented. We further contribute to this work by focusing on the roles that storytelling can play toward social justice in a crisis context. The stories analyzed here don’t follow the traditional sense of plot-based, coherent narrative but constitute a constellation

of lived experiences toward an antenarrative of the COVID-19 to challenge the mainstream narrative and the power structure as well as to create exigence to strive for equity and justice.

METHODS: STORYTELLING AND NARRATIVES IN COVID-19

To understand the storytelling and narrative practices developed during the COVID-19 pandemic, we conducted qualitative analysis of stories curated on two platforms from non-Western contexts: one located in China (UnCoVer Initiative) and one in Nepal (Nepal PhotoProject). The qualitative (rhetorical) analysis of the multimodal stories that consisted of blog posts, Instagram posts with pictures and stories was driven by the following questions:

- How could the non-Western practices of storytelling inform the value of experiential knowledge in transcultural crisis/risk communication?
- How do the activists and the public in various global non-western contexts use storytelling as an act of social justice to communicate socio-political and economic aspects of the pandemic?

Rhetorical Analysis

To conduct our qualitative analysis of the collected data, we took an approach of rhetorical analysis. This method helped us analyze two different sets of data with a common approach. We, as both non-western scholars, specifically avoided the traditional rhetorical analysis of searching for ethos, logos, and pathos. Our approach of analysis focused on being more self-reflexive towards our own methods and understanding that our data possess understanding of varied rhetorical practices across language, culture, and time; we attempted to directly address these incongruities by overcoming our own blind spots, biases, and binaries (Mao, 2013). Our analysis focused on getting deeper insight of each sample artifact. As we analyzed these stories, we let the stories speak for themselves without applying any Western-centric analytical lens. Since these two artifacts were situated in two different non-Western contexts, we took the contextual and cultural information into account such as: governmental and institutional oppressions in these two contexts, the varied social injustice issues that each artifact evokes, and finally, we purposefully avoided creating

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binaries when analyzing. Instead, we recognized that each platform has a different focus and method of storytelling. This recognition allowed us to seek similarities in sharing and highlighting the experiential knowledge that people impacted by the pandemic had to offer, as well as differences. Finding some similarities and understanding differences in these platforms, we purposefully decided not to implement any Western standard of rhetorical analysis.

We selected around 19 artifacts from each platform that included: blog posts from UnCoVer Initiative and Instagram posts with stories from the Nepal PhotoProject. Both platforms have a lot of stories related to the COVID-19 pandemic. We wanted to be selective of these stories targeting the first few weeks of the pandemic and then the first few months after the initial outbreak. We selected the representative sample with these four specific features that our research question demanded: (a) storytelling as the major feature, (b) COVID-19 related experiences and relief efforts, (c) activism and community building that tackled challenges of the pandemic, (d) non-Western knowledge making practices.

For our analysis, we took a grounded theory approach. Grounded theory, as articulated by Saldaña

(2013) usually involves meticulous analytic attention by applying specific types of codes to data through a series of cumulative coding cycles that ultimately lead to the development of a theory—a theory “grounded” or rooted in the original data themselves. Through multiple cycles of coding, we were able to identify common themes in these data sets. The coding of artifacts from each platform was conducted separately. After each cycle of coding, we came together to compare our notes and discuss where the data was leading us. These discussions led us to get a nuanced understanding of how the non-Western rhetorical practices and values shaped these stories particularly in a global crisis. During the third cycle of coding, we combined our emergent codes that lead us to four different categories. Guided by the collective and action-oriented social justice definition (Walton, Jones, & Moore, 2019) and the capacities of narratives in technical communication (Jones & Walton, 2018), our coding attuned to practices that recognized, revealed, and rejected oppressive practices and aimed at developing coalitional practices across national borders and cultural differences. In Table 1 below, we describe and define the emergent categories, codes, and provide some data samples.

Table 1. Emergent Categories, Definition, and Codes

Category	Definition	Codes	Sample
Critical storytelling and reflections	Using critical storytelling and reflections to reveal and reject injustices	Storytelling, understanding contexts (current and interrogating historical context), heroic narratives	“Open invitation to storytellers to share their stories” “A father’s diary in the wake of Huanggang’s lockdown”
Building collective knowledge	Using storytelling to build collective knowledge to navigate crisis	Response to COVID, COVID-PSA, historical information	“List of things to do to prevent COVID-19”
Developing solidarity	Using storytelling to amplify voices of the marginalized people by developing solidarity and fostering identification	Transnational stories, rejecting state’s actions, calling for solidarity, fostering identification	“I make 400 rupees a month...” “Is Sinophobia only skin deep? An NYU Shanghai senior’s experience with COVID-19”
Establishing coalitional spaces	Using storytelling to establish transnational and transcultural coalitional spaces for intersectional thinking and collective actions	Coalitional actions and protests, social justice actions	“Who touched my hair?” “Calling Social Justice Warriors”

FINDINGS AND ANALYSIS

Our coding and analysis yielded four different capacities that these storytelling practices embody in response to COVID-19 in transnational and transcultural contexts. In this section, we elaborate on each of our categories and share our results.

Revealing and Rejecting Injustices Through Critical Storytelling and Reflections

Using critical storytelling and sharing reflections, the UnCoVer Initiatives and Nepal PhotoProject provide space to share stories of personal experiences, observations, critical reflections, and interrogations to challenge injustices. The stories offer political awareness and contextualize injustices that have worsened during the pandemic. These critical antenarratives can help readers question the “norm,” exposing oppressions that have taken forms of violence, sexism, racism, exploitation, marginalization, and dehumanization (Hartlep & Hensley, 2020). Using storytelling as a method of interrogation, various stories told within these two platforms amplify voices of people not represented in mainstream media. Throughout our analysis we use “amplify” in the sense that “center[s] the lived experiences and epistemologies” of marginalized populations, borrowed from the Amplification Rhetoric from Black/African-American rhetoric (Mckoy, 2019, p. 28).

Nepal PhotoProject curates stories from people from various strata in Nepal and abroad, often ignored by the mainstream media, Nepali government, and other non-profit organizations, using hashtags such as #storiesofpandemic #Covidresponse #storiesofmigration followed by hashtags of location such as #Nepal. One story is about a 70-year-old woman named Khatum whose life has been crippled by a lockdown in Nepal. Khatum lives on the Nepal-India border in a marginalized community and travels six kilometers daily every month to buy food so that she can save money, but due to COVID-19 it has become difficult. In the story curated in the Nepal PhotoProject on December 23, 2020 they share:

Khatum’s age makes her vulnerable to the COVID-19 virus, but she says she does not have the luxury of staying at home.” Khatum is quoted as saying, “We poor people, we cannot afford to stay home and wait for the virus to pass—we need to

find ways to save money so our families can survive. (Nepal Photoproject, 2020, December 23)

Khatum’s sons are abroad in Qatar, and to support her big family, she needs to make this commute. This story is one example of how the platform has curated stories from diverse places and voices from various rural communities in Nepal which have suffered due to the pandemic. These stories also highlight the more common issues of injustices in Nepal, including immigration; lack of access to health needs, education, medicine, and money; and caste-based discrimination, gender-based violence, and other forms of discrimination. These issues are persistent in Nepal through systemic violence and institutionalized domination, but the COVID-19 pandemic has heightened people’s suffering. This example fosters identification as argued by Jones and Walton (2018). As they argue, people produce and reproduce collective identity through stories that further help in persuasion in contexts such as social movements and activist organizations. By sharing Khatum’s story, Nepal PhotoProject showcases the suffering of poor people who live in between borders, whose families have immigrated, whose survival is questioned during lockdown in Nepal, and who have been ignored and never represented.

Likewise, within UnCoVer, collective reflections are also sometimes contextualized in the broader system and history of injustices. In one post, the panelists reflected upon the historical context of both racism against Chinese people in Chinatown in San Francisco during the bubonic plague, but also Chinese people’s racism against African people that can be traced back to the late Qing dynasty when China met the West and the parallel development of scientific racism in the West where China absorbed those racist ideas (Waley-Cohen, Lin, & Qiu, 2020). Regarding mask-wearing, there’s reflection on the recent historical context of China’s increased presence on the global stage and the resulting misunderstanding of China and Chinese culture as well as on the history of mask wearing dating back to the 1918 flu pandemic to help us understand mask politics now (Decillis, Xu, & Shi, 2020).

Some of the common ways that both platforms reveal and reject injustices are to expose governmental malpractices, logistical problems, discriminations, lack of access to resources at the state and community levels, as well as the racism and xenophobia that targeted a lot

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of Asians at the global level. For example, in UnCoVer Initiative a social worker, Guo Jing, questions the government lockdown policies:

What about sanitation workers in Wuhan who had to continue working during lockdown yet were not provided with enough PPEs? How should we deal with the logistic problems when transporting relief resources especially given the corrupted Red Cross system in China? (Guo & Xiao, 2020)

Nepal PhotoProject reposted a picture of protests from July 23, 2020 that displayed a man showcasing death and the caption read, “The battle is not won yet . . . the authorities are fast asleep, sometimes a plain nudge might not be enough . . . our dear government is dilly dallying with its petty politics and power struggle.” (Nepal PhotoProject, 2020, July 23)

Both stories questioned the inadequacies related with relief actions and showcased that the authorities who needed to act were just silent at the people’s suffering, critiquing, and resisting authorities such as the Nepali government and humanitarian organizations in China. These platforms provide a voice to people who want to openly reveal and reject injustices done by the authorities in their respective contexts. Centering the experiences of multiple-marginalized individuals helps the readers to better recognize how their daily, mundane practices contribute to the marginalization, exploitation, and powerlessness of others (Walton, Jones, & Moore, 2019).

Building Collective Knowledge via Storytelling on Navigating a Crisis

During COVID-19, misinformation has been rampant on social media sites, while the established government systems and mainstream media might be overwhelmed, especially during early stages of the outbreak. In such a situation, “the need for collective knowledge about this pandemic is critical for people to understand ways to practice family and community safety” (Baniya & Potts, 2021). Both platforms worked towards building collective knowledge by curating stories of how people are trying to navigate the pandemic in Nepal, China, and globally. This collective knowledge building was conducted by transnational collaborators and storytellers.

Both platforms became a common sharing point that curated various types of knowledge, information,

and praxis about the ways people were responding to the crisis. Nepal PhotoProject’s first ever post was a public service announcement about the COVID-19 pandemic. By sharing playful images of children, they wanted to share a common message of “Control Panic.” The playful photographs, accompanied with a larger font, tried to create a calmness about the situation. There were also PSAs about the importance of social distance, other fun-filled examples of how not to panic, while some included historical images of past pandemics in Nepal. Additionally, they also shared information about stress related to the pandemic, showcasing the values of Nepali community in helping and supporting each other. These stories contextualize social inequities that reflects the important role crisis communication can play in advancing broader social justice goals by empowering people to identify the government’s inadequacy in managing the COVID-19 pandemic and increasing their political awareness which ultimately contributes to various civic networks in crisis management (Ding, Li, & Haigler, 2015).

In a story on the UnCoVer Initiative by Yuanzi (2020), the author discusses confusion about masks, policies on quarantine, and conflicting information that he received. He wrote:

I recall now that the turning point was the 23rd, the commencement of Wuhan’s lockdown. From then on there was a clearly jittery atmosphere. One could find many “horror” videos on the internet with questionable credibility: the breakdown of a medical worker, a patient collapsing in the hospital lobby, a body being carried out from a residential complex, and the voice message of a Wuhannese-speaking nurse that went viral. (Yuanzi, 2020)

While pointing out sarcastically the contrast between the government calling out “rampant rumors” and the limitations of its own action in crisis relief, Yuanzi’s (2020) story is an example of antenarrative by describing how he and his wife traveled home for the Lunar New Year, navigating impromptu roadblocks in their county and village, and their attempts to secure masks and groceries in the Huanggang city area. As Small (2017) argued, “antenarrative is woven into narrative both consciously and unconsciously and applies to both the explicit need to make sense out of situations and the implicit work of creating an organizational or community identity” (p. 240). In

Yuanzi's story, we sense the unconscious anxiety and fear, but then consciously we sense the questioning of credibility, trying to navigate the rumor territory, and being sarcastic of the current situation.

One of the major goals of both platforms during the pandemic was building collective knowledge via storytelling to help their followers navigate the crisis. These platforms used stories from the poor, vulnerable, and frontline workers to reveal and reject the social, political, and economic sufferings. In doing so, these stories also help create collective knowledge of responding to the crisis, on the frontline or under lockdown with often very minuscule details of daily life that had been disrupted due to the pandemic. For example, in one of the stories on UnCoVer about a gay couple, one of whom traveled to Wuhan as a medical nurse (路LRH, 2020), they share:

Medical supplies in affected areas were tight. In anticipation of this battle, Xiaoyang's hospital donated all its protective medical suits to Wuhan's hospital. Having been told that they would receive theirs in Wuhan, no one brought any with them. They learned today, however, that the local hospital had insufficient protective equipment. Besides, no daily necessities were available, and everyone had to fend for themselves. (路LRH, 2020)

Likewise, Nepal PhotoProject also shares similar stories of the frontline workers with an image of frontline workers on Aug 18, 2020, the story says:

During the pandemic, the hospital was scrambling as they were not prepared to deal with a pandemic of this scale—there weren't enough protective gear, or staff . . . If you work in the health sector, every day is a challenge, but this pandemic feels like a battle that never ends . . . I move between fear and acceptance now where I would rather focus on my skills and energy on handling the crisis rather than live in constant fear. (Nepal PhotoProject, 2020, August 18)

These stories share perspectives from medical workers who can undoubtedly reveal the material conditions of the frontline of the pandemic, including the shortcomings of systemic structures that failed to respond to the pandemic in effective ways. Ding (2014) argued that this form of media is guerilla media that is flexible, mobile, and accessible to and widely used by

the public. Both platforms curate contextualized local, regional, and transcultural stories providing space for citizens to share their own stories in their own voice (Frost, 2013). At a time where there were many rumors and misinformation gripping the online and offline spaces, the stories helped people understand the day-to-day struggles of the frontline workers instead of seeing them only as the "heroic" workers who are working miraculously.

Developing Solidarity Through Fostering Identification and Amplifying the Voices of Marginalized People

By sharing multimodal stories, both platforms help foster identification among a larger audience to understand the complex life situations of people navigating the pandemic. As Jones and Walton (2018) argued, identification "pushes the audience and narrator toward consubstantiality, not only rhetorically, but symbolically and actionally by creating rhetorical visions" (p. 245). Using their stories and reflections to help amplify the voices of other marginalized communities, activists, scholars, students, teachers, and frontline workers could develop solidarity among communities. By justifying the experiences of marginalized communities, the platforms draw attention to possibilities for rhetorical engagement in crisis response and introduce exigencies to managing crisis aftermath with social justice goals.

In Nepal PhotoProject, those justifications come in the form of detailed life stories as well as an image or sometimes a quotation, creating solidarity with all the random strangers who are evoked to use their phones to take pictures and gather stories. For example, in a story about a blind couple, posted on October 2, 2020, shares:

Man Bahadur Kunwar and Gorikala Sunar are a blind couple from Jumla. Their families had abandoned them and lived in a cowshed. They used to travel from village to village singing to earn money but could not do so during lockdown. Nepal PhotoProject covered their story in July, and a small drive has managed to raise funds for temporary relief for the couple . . . Meanwhile, the ward chief has promised to raise funds and find more sustainable solutions. (Nepal PhotoProject, 2020, October 2)

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This story from Jumla, a very remote part of Nepal, is an example of how the Nepal PhotoProject created a space of fundraising, identification, and developed solidarity among various strangers as well as government officials to provide relief to this blind couple. These practices help recognize and identify injustices in issues, such as caste-based discrimination in Nepal, race-based discrimination around the globe, poverty, discrimination against disabled people, crisis of the Nepali immigrant workers, and international movements such as #BlackLivesMatter. This space further creates rhetorical engagement with social justice actors in Nepal who were protesting in the street, government officials, and people who read and share these stories. As an embodied rhetorical practice, these images can better amplify the experiences and voices of protestors and urge Instagram followers to participate in such protests (McKoy, 2019).

In creating these engagements, this space opens the issue of historical marginalization within Nepali communities that are rooted deeply in the society, such as the issues of the Dalit community in Nepal or the Madhes community in Nepal, often not reported by the traditional media. During the time of COVID-19, people from these communities have suffered the most. We mentioned Khatun's story in revealing such injustice in rural communities could foster identification (Nepal PhotoProject, December 23, 2020). Likewise, addressing the issue of gender-based violence in Nepal, which escalated during the time of COVID-19 with more than 3,000 reported rape cases, this platform curated series of protests by the young feminists in Nepal. Images from these communities relating to these issues may trigger emotional responses from people which help create the shared "rhetorical vision" thus contributing to solidarity (Jones & Walton, 2018).

COVID-19 stories on UnCoVer speak directly against various acts of discrimination and violence against people of Chinese and Asian descent. For example, in an interview with a Chinese American student studying at NYU Shanghai, she shared her experience of being targeted due to Sinophobia in the United States at a time when she was more likely to face Sinophobia in New York than contracting the novel coronavirus (Hoover, 2020). In this story, Maya Wang was interviewed because of her social media post where she drew a mask on her face and two red lines of tears falling from her eyes. As she said in the interview:

So, I wanted to make things a little bit more hopeful but still bring what's serious and bring attention to the fact that this is a real crisis and we need to be compassionate to other people. That's basically what these posts are about. I feel like the surgical mask has been a symbol for this entire movement about Chinese people wearing masks who are at the center of these racist attacks. (Hoover, 2020)

Wang's posts could foster identification among people of Chinese/Asian diaspora across the globe and draw the audience's attention to the violent "interpersonal injustice" during the pandemic (Ding, Li, & Haigler, 2015). The interviewer, Ryan Hoover, was also in a similar predicament. Their conversation could help audiences resonate with this unique positionality as Chinese American students with Chinese family ties, making the call for action at the end of the interview much more powerful and persuasive.

Narratives that foster identification are also often affective, highlighting the emotional and affective impacts of the pandemic and its related policies on people's lives that could further help build solidarity. In a conversation between two Chinese feminists first published on a Chinese feminist podcast, Guo Jing, who published her pandemic Wuhan Diary, shared her feelings of "despair, scary, loss of control, a sense of helplessness" while preparing for the sudden lockdown (Guo & Xiao, 2020). On the other hand, Chinese people living abroad, like Li Yang, reported feeling disillusioned or disoriented after reading about the outbreak in China on social media (Yang, 2020). Such affective responses contribute to the transnational assemblages and counter-public enclaves that can help inspire social actions (Papacharissi, 2015).

Establishing Transnational and Transcultural Coalitional Spaces for Intersectional Thinking and Collective Actions

Storytelling invites connection and collaboration in the form of narrator and listener and gives space for both towards forming a space for collective sharing, thinking, and actions. By curating diverse perspectives and engaging in issues such as race-based discrimination, caste-based discrimination, issues of migration, joblessness, and internal discrimination during the pandemic, both platforms established transnational and transcultural spaces to challenge power structures

and advocate for marginalized communities thus contributing to the antenarrative in a crisis context.

In tackling the issues of inequality and injustice, especially during COVID-19, the Nepal PhotoProject transforms its space to reach out to the transnational and transcultural communities within Nepal and beyond, inviting intersectional and collective actions from socially and politically marginalized communities. In one post, “Calling for Social Justice Warriors” on June 28, 2020, Nepal PhotoProject invites people to participate in a protest against the lack of governmental concern for COVID-19 tests:

Sudan Gurung, an activist with #EnoughisEnough campaign has a raging headache. Sudan has been on peaceful Satyagraha (protest including hunger strike) since 25 June, lobbying the government for a more effective COVID-19 pandemic management and response . . . Sudan encourages the activists to start lobbying from where they can/however they can. (Nepal Photo Project, 2020, June 28)

By amplifying the voice of the protestors and inviting people to participate in this lobby against the government, this space adapts to the needs of the storytellers, other coalitions, and the social justice activists, thus becoming a space for actions against the social injustices. Additionally, their intersectional practices are shown in how they acknowledge how the issues brought by the COVID-19 crisis have multidimensional effects on the Nepali communities within Nepal and beyond. They highlight the stories of transcultural Nepali communities abroad and within Nepal and bring attention to those who are in power and who can amplify these voices.

As we've shown before, UnCoVer has also curated stories that highlight the transcultural and transnational positionalities of people navigating the pandemic. In identifying social injustice issues, some stories also offer important critiques that can foster intersectional thinking. By curating stories like “Who Touched My Hair?” it invites people to reflect on problematic crisis response policies through intersectional thinking (Hou, 2020). Sharing problematic Chinese mainstream media portrayal of female medical workers, the author writes:

No matter how much it is the women's initiative to work on the front line, the media never fails to mention that their efforts and sacrifices are approved by their boyfriends, husbands, and family

members. This dissolves women's agency at the societal level and ignores their social value, merely defining them within the familial structure. (Hou, 2020)

This critique also highlighted the contributions of female labor throughout crisis reliefs in various sectors, inspiring people to pay more attention to these issues and calling for more equitable treatment for women professionals.

Further, revealing and rejecting injustices through reflections upon personal experiences and observations also lead to cross-network collaborations to contribute to those in need directly. For example, when posting an essay “The Child in the Basement” (Joyce, 2020), the version published on UnCoVer's account on Chinese social media platform, WeChat, would also accept “kudos” money donated to the LGBT center in Wuhan that helped HIV/AIDS patients secure medication during the lockdown.

Both platforms invite everyone to see this digital space as a coalitional space for building connections to collectively combat the social inequalities that have gripped the lives of many marginalized populations in Nepal and Chinese people worldwide. As past scholarship demonstrates, “individual whistleblowers and grassroots leaders in civic organizations played vital roles in communicating about such systemic issues of social injustices to authorities and the public” (Ding, Li, & Haigler, 2015, p. 32). Both platforms functioned as such spaces that could link various actors through persuasive and direct call for actions which aligned with the action-oriented social justice goals (Walton et al., 2019).

DISCUSSION

In this article, we've analyzed the UnCoVer Initiative and Nepal PhotoProject as two crowdsourcing, curating platforms that curate antenarratives of non-Western experiences related to the COVID-19 pandemic. These antenarratives showcase how the systemic and structural practices, both within the borders of Nepal and China, and transnationally, have marginalized the most vulnerable. As such, both initiatives increase social awareness of the situation by developing a storytelling infrastructure via the interconnected web of information that mobilizes the actors or the storytellers and serve as more efficient and electric word of mouth (Papacharissi, 2015). In doing so, these curators collectively reveal as

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well as reject the injustices by sharing lived experiences, amplifying voices, creating space for critical reflections, and by urging audiences to participate in collective rejection of such injustices. By revealing these injustices, both platforms “call for an action, investment, and coalitional move on either in the revelatory act or in act of hearing, recognizing and accepting” (Walton, Jones, & Moore, 2019, p. 140). In these networks of various transnational actors, the antenarratives “[do] not act as a thing but creates a movement of knowledge between the members of this storytelling frame” (Legg & Sullivan, 2018). This movement is collective, communal, localized, and transnationalized that foregrounds and advocates for the marginalized populations suffering through the pandemic.

Hence, by curating fragmented, non-linear, but critical and reflexive antenarratives that are different from the mainstream stories, exemplifies ways non-western communities respond to injustices exacerbated by a global pandemic in transnational spaces. These antenarratives resists the cohesive narratives and present fragments, plurivocality, that are “woven into narrative both consciously and unconsciously and applies to both the explicit need to make sense out of situations and implicit work of creating an organizational or community identity” (Small, 2017). We see the actions of building collective knowledge and developing solidarity as crucial goals and outcomes of an antenarrative during a global crisis. Taking advantage of the networked digital technologies to establish space for antenarratives reflects a socially just and community-oriented approach to crisis communication that amplifies experiences often marginalized and rendered invisible in dominant narratives of the pandemic. This interrogation showcases how social, cultural, and ideological markers could shape how people experience and respond to the pandemic similarly and differently in transnational spaces.

Examining antenarratives in transnational spaces allows researchers and practitioners to learn alternative actions to better support transnational, especially multiply-marginalized communities, taking into account the political, cultural, social, and economic contexts. Further, antenarrative allows researchers to focus on experiential knowledge which, as Jones, Moore, and Walton (2016) argued, “emboldens the field’s objectives to unabashedly embrace social justice and inclusivity as part of its core (rather than marginal

or optional) narrative” (p. 212). In other words, not only is antenarrative an important methodology valuable to studying technical and professional communication in different social and political contexts, but projects like ours would contribute to the broader antenarrative of TPC, further embracing threads of TPC influenced by the humanism, sociocultural, and then later the social justice turn.

CONCLUSION AND IMPLICATIONS

As shown in our article, civic intervention and risk management at the grassroots level increases people’s access to transnational risk communication networks, especially given its emphasis on emotions and cultural values (Ding, 2014). Stories and narratives serve as tools to critically examine “how stories shape the cultural logics of the workplace,” and here the logics of crisis response in various communities (Small, 2017, p. 249). The stories of lives of marginalized and vulnerable people impacted by COVID-19 not only provide space for hidden or neglected communities, but also demand identification, reflexivity, as well as the engagement of another person in recognizing these forms of injustices (Jones & Walton, 2018). Through such contextualized reflections, researchers and practitioners can develop a more critical perspective on crisis relief policies and strategies thus be more aware of how collective knowledge can be built as a social justice action.

Listening to stories shared by activists and the public allows both researchers and practitioners to understand how systematic oppressions and unruly behavior of governments contribute towards continuous marginalization and violence. Recognizing and valuing the works of these spaces are important for technical communicators, crisis managers, and disaster responders. In crisis relief practices, how can policymakers and responders work with marginalized populations to center their needs and their experiential knowledge in developing more humane ways to respond to the crisis while recognizing the disproportionate impacts of a crisis (Schoch-Spana et al., 2007)? For future research and engagements, we urge researchers and practitioners to pay attention to the grassroots and civic-community based research and crisis policy development by engaging storytelling to amplify the voices of oppressed communities.

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“From Homeless to Human Again”: A Teaching Case on an Undergraduate “Tiny Houses and Technical Writing” Course Model

By Erin Trauth

ABSTRACT

Purpose: This teaching case discusses a community-engaged, service-learning-based, undergraduate introductory technical communication course that employed storytelling as a pedagogical method and a key element in the deliverables produced, including instructional documents for volunteers, program informational brochures for potential volunteers, and a guidebook for a new career readiness construction training program for program participants.

Method: The course, titled “Tiny Houses and Technical Writing” partnered with a local 501(c)3 non-profit organization, Tiny House Community Development (THCD), which builds free tiny homes and offers construction-based career training programs for those experiencing homelessness. We used several techniques to elevate our community partner’s narrative and highlight local issues of homelessness, utilizing storytelling and personas as methods to provide human-centered designs. We also employed technical communication’s emphases on optimal format, arrangement, and style to revise and build documents. The course engaged in project-based service by producing various technical documents as well as providing direct service building tiny homes; this work was often completed alongside clients the THCD organization serves. Ultimately, we aimed to engage the stories of those the organization serves and reflect those stories within the deliverables.

Results: The students in this course ultimately helped THCD streamline communications, increase build productivity, and communicate its mission to the local community. Additionally, the organization used several of our documents in a grant competition and ultimately won \$12,000 in future funding. We believe the storytelling element present in the technical documents elevated these communications. The course also sparked several new collaborations, conversations, and publications, thus propelling the organization’s stories—and its human elements—into the larger community.

Conclusion: “Tiny Houses and Technical Writing” serves as an example of a community partnership model for undergraduate introductory technical writing courses and tiny house building groups.

KEYWORDS: technical communication pedagogy, introductory undergraduate technical writing, service-learning, community engagement, tiny houses

Practitioner's Takeaway

- Technical communication courses with storytelling as a pedagogical method to promote human-centered design can help students, community partners, and clients that serve community partners in mutually beneficial ways. A story-based approach to these partnerships allows for students to truly understand the stories of those the organization serves, construct well-informed technical communication personas, and create engaging, human-centered deliverables.
- Instructors of undergraduate introductory technical communication courses should consider partnerships with organizations that would allow students to engage in service acts alongside the clients the organizations serve, extending direct service from a “service to” to a “service with” model that can elevate the course’s service work to an effort that promotes social justice and encourages long-lasting impacts on students’ civic engagement.
- Collaborations can be enhanced if storytelling and narrative are laced throughout the documentation process, from early site visits and meetings to collaborative discussions to the production of final deliverables.

INTRODUCTION

Introductory technical communication courses with a civic and community engagement component, particularly those courses with storytelling as a pedagogical method, have the potential to showcase the range of technical communication programs, encourage interdisciplinary collaboration, grow ethical and critical thinking skills, and serve the local community in positive ways (Andrews, Hull, & Donahue, 2009; Jones, Savage, & Yu, 2014; Walton et al., 2016). In this teaching case, I discuss a Spring 2019 undergraduate technical communication course at High Point University (HPU) titled “Tiny Houses and Technical Writing.” The course helped to 1) teach core genres of technical writing through civic engagement; 2) tell the unique stories of people experiencing homelessness in the Greensboro/High Point, NC, area; and 3) aid a non-profit local organization, Tiny House Community Development (THCD). THCD’s mission is to build free tiny homes (typically, homes built to be less than 500 square feet) and provide construction-based career training programs for those experiencing homelessness,

thereby rehabilitating lives and providing a sense of community, pride, and accomplishment (Jones, 2019).

The students in this course ultimately helped the THCD organization streamline communications, increase build productivity, and communicate its mission to the local community. Additionally, the organization utilized several of our documents to promote its professionalism and coordination of volunteer efforts in a local grant competition and ultimately won \$12,000 in future funding. We believe it was the storytelling element present in the technical documents that elevated these communications. The course also sparked several new collaborations and promotional magazine publications, particularly materials linking the university, the organization, and the local community, thus propelling the organization’s stories—and its human elements—into the larger community. In this teaching case, I will describe this course model with a focus on how it utilized storytelling as a core theme to help students understand the importance of human-centered design in documentation. I will also demonstrate how these stories ultimately helped amplify the organization’s technical deliverables and overall mission.

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Tiny Houses and Technical Writing: Course Planning and Background

In Fall 2017, HPU, a private liberal arts university in High Point, NC, launched a new Public and Professional Writing undergraduate minor program in its English department. At first, the program's focus was on an introductory, 2000-level course titled "Introduction to Public and Professional Writing." This course was marketed across campus as an orientation to the genres of public and professional writing. At this time, an undergraduate technical writing course had never been offered at the university.

As a new assistant professor at HPU in 2017, I was tasked with promoting the new Public and Professional Writing minor program and leading its future direction. I began teaching the introductory professional writing course and also began looking for community organizations to partner with, specifically with the goal of shaping a new technical writing course around it. I aimed to make the first technical writing course at HPU focused on a collaborative community engagement project to help draw student interest and to present our technical writing course as a potential future space for service-learning projects both now and in potential future iterations. The community engagement lens was also targeted to capitalize on existing program strengths in experiential learning and creative writing as well as emphasize the possibility for technical writing undergraduate courses as a source to promote social justice and access, particularly through storytelling (Walton et al., 2016). Nancy Small (2017) traces the long history of storytelling in technical communication, beginning with a "narrative turn" in the 1990s from the old adage that technical communication "... focused on precision, clarity, and conciseness—must not be tainted by any scent of the literary or the aesthetic" (p. 236). Drawing on foundational texts that engage stories as "both data and discourse" (Katz, 1992; Longo, 2000; Winsor, 2003), Small explains that stories can "... allow us to analyze organizational identity, organizational discourse, and the persuasive role of shared narratives in forming and influencing the broader company or community" (p. 235).

I understood that utilizing storytelling as a core concept within the new professional writing program might help me to use a shared narrative to make an impact on the broader community, especially in its defining iterations. For new professional, technical, and

scientific communication undergraduate programs, it can, at times, be challenging to delineate program aims and explain how the program fits within the university. Interdisciplinary efforts are one way to introduce new programs to other university departments. Still, these collaborations can be difficult to forge for new programs in the earliest stages of defining and establishing themselves within the frameworks of the university. Programmatic and departmental efforts are all competing for university resources and attention, which can further complicate these challenges. With community engagement as a course and programmatic emphasis, new programs can highlight their unique features and become stronger candidates for university resources. Further, such courses can help students grow ethical and critical thinking skills that translate well across disciplinary boundaries, thereby making the larger objectives of the program easier to communicate and connect with other programs and with the university. As an assistant professor trying to introduce a technical writing course into a new writing program to the university, I knew it would be beneficial to build upon ideas of those scholars before me who encouraged both community engagement and storytelling (Jones, 2016).

One community story in particular resonated with me for its match to HPU's own narrative: a December 2018 video from a local news station featured a new tiny house community program, THCD, serving those who were experiencing homelessness. The first community had broken ground in 2017 and was on track to home its first citizen: a man who formerly experienced homelessness, whom I will provide the pseudonym Peter for the purposes of this article. I learned more about the THCD organization. THCD, a 501(c)3 nonprofit organization, offers new homes—typically homes of 500 square feet or less—to those in need. Clients are referred to THCD from other local organizations aiding people experiencing homelessness or housing insecurity. The organization serves as a sustainable model of a low-cost, quick-build solution for communities experiencing high levels of homelessness. Most of the organization's building materials are donated or sponsored by local companies, and other resources are acquired through the support of grants or by individual donations. The organization's building labor is led by a handful of board members, some of whom are or were contractors, and, every week, volunteer individuals or groups visit the sites and help

with the builds. The labor model is similar to what many may know from Habitat for Humanity builds.

The organization's initial core mission was to help individuals experiencing homelessness with brand-new, low-footprint tiny homes, meant to serve as safe and stable home bases as these individuals work to rebuild their careers and lives. In the summer of 2019, THCD finished its first Greensboro home site, a community of six tiny homes ranging from 180-288 square feet, each with its own bedroom, full bathroom, kitchen with full-size appliances, and living area. The organization showcased plans to break ground on its High Point site, a community of five homes ranging from 384-448 square feet. In the fall of 2019, the organization started on an additional community in Greensboro, with six homes planned at around 504 square feet each. In 2020, THCD broke ground on a High Point community that will specifically aim to house veterans, and the organization now has sites planned or in development in all areas of the greater Triad, including High Point, Greensboro, and Winston-Salem. THCD is also growing a construction career readiness training program, which is offered to a number of its clients living in the tiny house communities. Taught by general contractors and based on the National Center for Construction Education and Research (NCCER) curriculum, the program offers training in a number of in-demand construction trades, allowing THCD program participants a chance to not only live in a new home but learn valuable skills which can translate to a new career in construction.

What really stood out about Peter's story was the fact that he had helped the organization in the efforts to build his new home. He was part of the career training program, taught by THCD, that focused on teaching construction trade skills to those experiencing homelessness. Peter states in the video:

[The career training program] will help me get back on my feet and start working on my future and clearing some wreckage of my past up. Just start taking care of myself like I'm supposed to. It's just kind of moving me forward in the right direction.

Peter's story built on THCD's narrative that it is an organization that not only serves but also truly helps rehabilitate its clients and empower them with skills to help them help themselves in the future. Peter adds:

There's definitely a need for people that know how to build houses and whatnot. Now that I have a pretty good idea of how they're put together and what the process is, it will definitely help me land a job in the future.

The video also features Scott Jones, THCD's long-standing Executive Director, explaining that when he looks at the six in-progress tiny homes, he does not see "just houses." Instead, he "sees six lives being changed."

I considered THCD's mission to "not just build homes but also build lives" (as stated by Jones, THCD's Executive Director). Dipadova-Stocks describes how the strongest service-learning outcomes can be achieved when a project is "grounded in the value of human dignity and the inherent innate worth of the individual" (2005), and THCD's existing messaging was focused on rehabilitation of an individual human life from multiple dimensions: gaining housing security, learning a new trade, and engaging in community work that promoted the idea that all members of a community deserve basic dignities. THCD's messaging connected to the roots of human-centered design, which focuses on deliverables made with a consideration of human rights, values, and dignity.

As I grew to understand more about this organization and its narrative, I knew THCD would be an ideal community partnership for undergraduate technical writing students at HPU. THCD's narrative paralleled the existing values of the university, and a potential collaboration seemed ripe with opportunities to practice storytelling and engage in human-centered design. Additionally, the fact that these homes were, in fact, tiny, and therefore able to be built on a decreased build timeline—often taking weeks to build instead of months—would allow for students to see a greater range of the building process within an undergraduate, 16-week semester model.

The idea for "Tiny Houses and Technical Writing" connected my intent for the longer-range story of the HPU Public and Professional Writing program with the High Point's community needs. I contacted THCD's Executive Director, Scott, and asked if we could work in "service to" and in "service with" the organization, with a focus primarily on creating human-centered technical documents. He enthusiastically agreed, and in the Spring 2019 term, "Tiny Houses and Technical Writing" commenced with nine undergraduate

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students, mainly sophomores, enrolled. In the following section, I will provide more details about the course model and the stories we studied as a class.

COURSE DESIGN AND PROJECT OVERVIEW

Building Lives (Not Just Homes): Storytelling, Direct Service, and Human-Centered Design as a Course Frame

In January 2019, “Tiny Houses and Technical Writing” began. The course title, before the inclusion of the service component, was simply “Technical Writing,” a 2000-level course that was advertised to sophomore and junior students interested in an introduction to some of the core genres of technical writing. The students were asked to engage in a layered service-learning approach: engaging both in direct service, in which students work directly with the clients an organization serves, and project-based service, in which students focus primarily on end products for use by an organization to meet its goals (Cress, Collier, & Reitenauer, 2013).

Incorporating the element of direct service through on-site construction training and service model allowed students in the course to develop better informed, more “embodied” (Meloncon, 2017) technical communication personas, which will be described in more detail later in this teaching case.

The students and I discussed the value and advantages of often engaging in direct service alongside the clients themselves. As much as possible, we would purposefully engage with and work alongside members of THCD who were also current or past clients or who had direct experience being rehabilitated and working within the group we sought to serve: those experiencing homelessness. Our subsequent time meeting and working with Mark, who will be discussed later in this section, and Peter, the person showcased in the video described earlier, both served as primary examples of this work. Alongside the advantages this course model would provide in our effort to craft human-centered instructional documents and a career readiness program training guide catered to the unique needs of persons being rehabilitated and homed via THCD’s programs, we would also see benefits from working alongside the program’s clients. Service-learning pedagogy often favors approaches in which students can work alongside partner-served clients, elevating service work that might

be viewed as “charity” in a solely “service to” model to a potentially more civic-minded “social justice” approach with “service with” work (Eyler & Giles, 1999; Lorenzen, 2014). A “service with” model may also increase the likelihood that students truly understand their own vantage points and develop a longer-lasting desire to continue community work. Service-learning models can help students realize their long-term ability to impact their surrounding social systems (Herzberg, 1994). In a final reflection, a student in the technical writing course wrote:

Our collaboration with THCD really opened my eyes to how privileged most of us really are. We live in a society where we easily take what we have for granted and are continuously wanting more. It was very inspiring to hear Mark’s story and how THCD came about in order to help those experiencing homelessness. Working with them really made me want to appreciate the opportunities I have had and use them to help others.

We also studied unemployment levels and the local housing crisis, seeking to understand the stories of local persons experiencing homelessness as well those who might be teetering dangerously close to homelessness or housing insecurity. Nearly 20% of High Point’s approximately 120,000 citizens live at or below the poverty line—which can seem, for students, a stark contrast to the beauty of HPU’s immaculately landscaped, gated campus (U.S. Census, 2019). HPU is a private university that caters, in large part, to families who can afford (or utilize resources and find a way to afford) a \$38,080 per year tuition rate and a \$15,438 room and board plan (HPU Tuition, 2020). At \$53,518 total for an undergraduate to attend HPU in 2020, the cost of one year at the university is more than double High Point’s per capita income (\$26,212 in 2019) and \$6,284 greater than High Point’s median household income (\$47,234 in 2019) (U.S. Census, 2019). Many HPU students, then, may struggle to understand poverty at a real level, and it was important for the course’s students to gain a greater understanding of the role an engaged HPU citizen should ideally play in the larger community, especially when the university promotes a strong community service-minded narrative in its messaging.

Social justice and service-minded work, of course, connects well with the charges at work in

human-centered design models (Jones, 2016). From its inception to the final deliverables, the course used storytelling as a core theme to help students understand the importance of human-centered design in documentation (Jones, 2016). Cardella, Zoltowski, and Oakes (2012) explain that as students focus on the more technical components of document design, they “can not only neglect their users and clients, but also ignore the greater social context and ramifications of their work” (p. 11). Through service-learning work, however, students can develop a stronger understanding of the people impacted by design decisions and the larger “social implications” (p. 11). Technical communication’s roots in human-centered design have, in recent decades, expanded to a human-centered design model (Zachry & Spyridakis, 2016); this interdisciplinary focus on the design experience draws heavily on sociological lenses, moving the focus from the user experience to a more holistic and humanistic design: one which places a greater significance on human values and dignity. Linking our course’s service work to the human stories of people experiencing homelessness and being rehabilitated through community support as well as a place to call home, often at least partially by the work of their own labor, allowed me to emphasize to the HPU students that our final deliverables should incorporate those human values. Specific final deliverables included client narratives, images, and histories being added throughout otherwise primarily text-based instructional and guidance documents.

Initial Research, Client Meetings, and Direct Service

Our course partnership with THCD began with extensive background research into the organization, its programs, and its people. Before any sort of client or on-site meeting, we spent nearly two weeks of course time watching videos, exploring social media posts, and reading previous news coverage on the organization. I shared Peter’s story—the story which enticed me to work with the organization in the first place, and we also intently studied Mark’s story. Mark, who served as the Tiny House Community Development Construction Committee Chair and organization board member, was an instrumental part of THCD and a person who embodied the THCD mission and values. Despite this, Mark’s incredible story was not

as apparent on THCD’s program documents, its web site, or social media posts at that time; by the end of our semester partnership, the HPU students found multiple ways, including snippets of his story in new program brochures, instructional documents, and a career readiness program guidebook, to tell his life’s narrative as a thread which laced through many parts of the documentation process.

Mark emphasized the narrative that the THCD organization sought not just to build homes, but to build lives: and that his story was a lived example of this model. We had studied him using all the data points we could from online sources beforehand, but he truly captivated the room of students when he delivered his message in person: with a fierce alcohol addiction, Mark drank every day since the year 2000, sometimes having to drink a 40-ounce beer just to stop shaking when he woke up and to start his day. For 12 full years, Mark experienced homelessness and lived in a tent in the woods. He panhandled during the day for enough money to buy more alcohol. One day, in 2012, he returned to his tent after having made enough money throughout the day to purchase four 40-ounce beers and found his tent cut to pieces and his few belongings strewn about the woods. At that moment, Mark decided he needed to make a change in his life, and, serendipitously, some volunteers showed up in the woods, seeking to help the people experiencing homelessness living in that area. Mark then was taken to a hospital and entered into a rehabilitation program and began attending church. It was through church that Mark met Scott Jones, who was already at work building a new non-profit organization that would build tiny homes for those experiencing homelessness. Mark, despite having no construction experience, then became involved with THCD; he learned, day-by-day, how to construct tiny homes through his volunteerism. In many ways, although the component of the THCD program did not yet exist, Mark was THCD’s first career readiness program participant, learning a trade and finding community around him which would eventually take him from being a hopeless, alcoholic man who lived in a tent for 12 years, to a sober man with a safe roof over his head, a member of THCD board, a volunteer trainer, and a small business owner. It was this personal empowerment model that Mark had himself experienced, inspiring the students to make deliverables that helped others get work done but also

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captured the powerful narratives at work within the THCD organization and placed these human stories at the center of focus.

After Scott and Mark's first visit to our class, I was met with a line of students after class, all telling me some version of "I cannot wait to help this organization!" The THCD story had been made concrete in the minds of my students, lighting a fire in them to aid the organization with its technical communication documents and help it to fulfill its larger mission. Without Mark's engaging storytelling, I am not convinced I would have seen that same level of student buy-in to the course model, especially considering the intensity of the service I was asking students to complete. I am no stranger to service-learning courses, having guided students over the years in a number of other service-learning course projects, and I saw excitement and an initial desire to serve that I had not witnessed before. One student in the class, a sophomore pre-law student with a professional writing minor, said:

I really appreciated hearing Mark's story because it made us realize that the THCD organization helps change lives. When he told us his story, we understood that the program could really work, and that made me buy-in to what we were doing as a class much more than other service-learning projects where I was not sure about my long-term impact or if the program truly worked.

Mark's story—and the ethos he brought to our learning situation—continued in our visits to the client site. During one visit, we were invited to help frame a tiny home wall using a powerful construction-grade nail gun. The students were timid, some outwardly expressing apprehension with their body language, physically turning their bodies away from the gun. Mark, already a guiding presence in our class, helped alleviate these apprehensions by reminding the students, again, that he had started with no prior use of a nail gun, but now he felt comfortable shooting them all day long: "I didn't know anything about these guns before, and now these guys put me in charge of shooting this thing all day, every day!" he exclaimed. Every student took at least a few turns shooting the nail gun that day, and quotes like these were able to be utilized in instructional documents for volunteers new to using a nail gun. It was Mark's story, injected onto

the pages after experiences like these, working with the HPU students, that made these considerations possible, and made our final documents more human-centered. For the rest of the visit, the HPU students worked to frame a tiny house wall with Peter, who formerly experienced homelessness and was being served by the THCD program. These embodied, lived stories—these human interactions shared while learning and building and the verbal quips that went along with them—helped bring this partnership, and the human-centered considerations we were living through on-site experiences to life for the HPU students—even when we were, at a later time, writing documents on the HPU campus, far removed from the muddy job site. These stories, shared between people like Mark and the HPU students, helped motivate and inspire the ultimate quality of the class deliverables. As Matthews and Zimmerman (1999) write on the integration of service learning and technical communication, such experiences help students to become "motivated to accept responsibility for their own education because their communication matters—it has direct results in other people's lives" (p. 386).

Over time, we eventually narrowed in on THCD's greatest immediate documentation needs. Based on their interests, the students were eventually split into core teams, with at least one major technical document as each team's focus, including instructional documents and brochures as well as a career readiness program guidebook. In the following sections, I provide further detail on these documents as well as how storytelling was intentionally injected into each deliverable throughout the design or redesign process.

Deliverable Examples: Instructional Documents and Brochures

One course assignment tasked students with creating tiny home instructional documents for building volunteers. To supplement these guides, the students added personalization and generated enhanced buy-in for the building volunteers through short snippets and quotes from stories of those persons experiencing homelessness who benefit from the tiny homes, as well as brief histories of the various programs. A short instructional document on how to don the proper personal protective equipment (PPE) on the THCD job site, for example, did not only include guidance. The document also included the name, brief story snippet,

and image of one of the people living in a THCD home in proper PPE at work building a tiny home frame and dressed in the appropriate hard-toed safety boots, clear goggles, and hard-top head covering.

Scott, THCD's Executive Director, explained to the HPU students why it was so important to engage in storytelling in the technical documents:

We get a range of volunteers at THCD, from individuals to corporate volunteers to civic and religious volunteers. Many of them come to volunteer with us with an initial interest in the 'tiny home' part of it—they come interested in learning how to build these homes they have seen all over HGTV. But once they get to know our story—and the stories of those we are serving—the volunteers discover so much more about the program, and their personal takeaway is so much greater. They even learn more from knowing these stories: they come in with no technical construction skills, but they leave our sites with new skills, becoming more comfortable and having the confidence to try to repair something or start a DIY project in their own homes. Most importantly, they also gain new perspectives and learn about people experiencing homelessness in the areas we live in, and by learning these stories through these documents and while they work on-site or while serving hot meals, they gain so much more from the experience beyond just working on a tiny house.

Deliverable Examples: Career Readiness Program Training Guide

Another team in the class primarily designed and edited a training manual for THCD's Construction career readiness Training program, which allows people experiencing homelessness to live in tiny homes while enrolled in an in-house construction trade training program. The Construction Readiness Training program is an initiative by THCD to not only provide housing for its clients but also provide a chance to build a new career in construction. Taught by licensed general contractors and centered on the National Center for Construction Education and Research (NCCER) curriculum, the program's focus aims to serve those who have faced barriers to employment and provides hands-on training in construction planning and math, blueprints, power and hand

tools, and build sustainability training. Additionally, program participants can receive certifications in the U.S. Occupational Safety and Health Administration (OSHA). Most participants graduate with a letter of recommendation and a certificate of completion. Mark explained that his THCD-led construction training helped him feel "from homeless to human again," and the students then used this as one core story thread throughout the subsequent deliverables, employing this phrasing in section headers and throughout the guidebook, intending to provide its users with a story they could use as motivation and inspiration when studying complex construction topics in the program.

In what would have otherwise been primarily a text-based training guide to accompany the career readiness program and to promote its availability, the HPU students also opted to provide a full THCD program history in the guide. Images from builds and past volunteer groups were also added throughout the guide, providing visuals to the THCD narrative and history, and thereby giving a "face to the name" of those involved in this organization's development. All of these elements were added with the goal of increasing the overall emotional impacts on the guide's users and linking members of the career readiness program with a larger narrative of community connection and support. With Mark's personal story in mind, we discussed the idea that those who already face employment barriers might need increased support and need to know the community around them supports their endeavors to rejoin the workforce. One student cited Mark's personal story of how he lived in a tent for 12 years and made the first step to rehabilitate his life when his tent was destroyed but also when a group reached out to him directly and asked if they could take him to the hospital, thereby beginning Mark's rehabilitation and path to a new life. The HPU student posited, then, that we should include many more visuals of community members at the THCD building sites and at Breakfast 4 Our Friends events, making it clear to members of the career readiness program through a visual argument that they had the support of so many people living around them and thereby encouraging them to stay the course through the more difficult parts of the training. Students requested images from the THCD team, and we chose to include images that showed large groups of people at work on the job sites to elicit this community support idea. Figure 1 below shows one of the images

From Homeless to Human Again

the students chose to include within the career readiness program guidebook. Of the many images available, students chose this example photo because it showed a range of build volunteers, representative of the diversity in ages, races, ethnicities, and abilities in our local community: Those in the photo were behind the build and, in the students' words, also "behind the THCD program participants."



Figure 1. Volunteer Group on THCD Jobsite (Greensboro, NC)

Across All Deliverables: Core Concepts and Strategies of Technical Communication in Practice: Organizational Elements, Simplification, and Personas

Many of the aforementioned instructional documents, program brochures, and guides were made from existing longer documents—typically pages of typed notes pulled from a variety of sources, some featuring complex technical construction jargon from the National Center for Construction Education and Research (NCCER) curriculum or early prototypes of brochures made on Word document templates with informal, simplified language and personal quotes. As a class, we engaged in some document redesign. In particular, we employed technical communication's emphases on optimal format, arrangement, and style, including, in particular:

- Chunking information,
- Prioritizing the order of sections,
- Highlighting of core sections through headings and subheadings,

- Constructing purposeful redundancies to enhance reader recall, and
- Simplifying complex jargon whenever possible.

We were also able to intently consider issues of context and contexts of use, for example, suggesting that THCD not just bind documents in a weatherproof binder but also laminate certain key instructional documents that might be taken out of the binder for use on its job sites, anticipating various weather and use conditions.

Another useful component of this partnership was that the construction of tiny homes themselves served as a fitting metaphor for how to construct human-centered documents: when one builds a tiny home, they are limited by a specific footprint, and no space can be wasted. The essentials must be thoughtful and purposefully fit into a tight space, and only the most important components can be included in the final product. At the same time, filling the tiny home with all that is needed to live, we do not want to crowd: this is a space we want to be aesthetically pleasing and rich with thoughtful design. We made an effort to leave white space for breathing room when possible, grouping like items, adding repetitive elements that tie the whole home together, and, in the end, making a visual impact that feels clean, inviting, and human-centered.

Personas and New Content

Our partnership with THCD also allowed for the use of more informed technical communication personas. As discussed earlier in this teaching case, the students were asked to engage in a layered service-learning approach: engaging both in direct service and project-based, which allowed for more informed persona development. Quality personas, which serve as depictions of real document users, depend on optimal "user data that underlies them, that is, the research that studies the ways in which users interact with an interface, product, or system" (Brumberger & Lauer, 2020). Used thoughtfully, personas can help document designers keep in mind that they are designing for real users with varying goals, motivations, contexts, skill levels, frustrations, and challenges (Mears, 2013). In their strongest iterations, personas will have layered, "embodied dimensions," including considerations of culture, bodily ability, and emotions (Meloncon, 2017), all in the context of increasingly mobile people using mobile devices for a number of worksite tasks. Because

of our focus on learning the stories of those served by the THCD organization, and by building parts of tiny homes alongside some of them, the HPU students in the technical writing course were able to get to know these people as multi-dimensional, complex beings, seeing a range of abilities and emotions and cultural differences along the way. We not only observed the program participants and build volunteers at work in building tiny homes, but by using the “service with” model of service learning, we worked alongside them. As a class, we are able to then reference more realistic personas of both the THCD program participants and the volunteers who might come out to the THCD job sites for the first time with limited or no construction experience. It was especially helpful in this case because many of the volunteers who help THCD come from college groups or ministries and have minimal to no construction experience. So the volunteer personas, along with the attributes, concerns, and questions these named personas might have were often in-line with those from our own student demographics and construction ability levels.

Our first class visit to a job site, in which the HPU students were taught to effectively don personal protective equipment and use a powerful construction-grade nail gun to frame a tiny house wall, for example, served as an optimal experience for students when they constructed a persona for their own instructional documents. For this reason, I asked students to bring a notebook to the first visit and record the thoughts, fears, apprehensions, and questions they were having as immediately as they could. They were instructed to make special note of the physical and emotional requirements involved in using a nail gun: what physical abilities does this action require? Who might be limited from completing this task because of a potential disability? What emotions might someone feel using a powerful nail gun (that, if used incorrectly, can seriously injure one’s body in an instant)? We considered issues of mobility and movement on a job site: would it necessarily be best to create instructional documents that would be viewed digitally on a mobile device? Or, given issues of access and equity (especially for those in the THCD program who might not have a mobile device) and context (e.g., would it be easier to have laminated hard-copy documents that could be bound to clipboards so as to make them hands-free for use when using a power tool?). We downloaded all of

our thoughts together during our next class meeting, writing out notes together on a shared whiteboard space and discussing our first impressions and major questions about these construction processes. By doing this, we were able to make personas based on real data points, aiding in our use of this technical communication technique in designing human-centered documents.

When working on the career readiness training program guide, it was also incredibly helpful for us to have been able to meet and learn the stories of some of the persons experiencing homelessness before and during our writing and designing period. We assigned names, key attributes, and informational/contextual needs for several sample personas. By getting to know our audiences through the stories of real people, we moved beyond demographics, statistics, and the stereotypes about people experiencing homelessness and job loss, putting names to our potential audiences and trying, at a deeper level, to help construct technical documents that met their unique concerns, work situations, and human needs. Moreover, by learning the unique stories and needs of people facing unemployment and homelessness and working side-by-side with people such as Mark (who had learned construction skills on THCD job sites, rehabilitated his life, and created a new path and role on the THCD board), we were able to construct personas of others who might be interested in working with and being served by the THCD program.

In addition to the more technical instructional documents and the career readiness guidebook, the class worked to create several new documents for use by the organization, including brand new volunteer brochures and a flyer explaining the organization’s “2020 campaign,” an initiative to build at least 20 new tiny homes across the Triad through the year 2020. In total, the class delivered six new technical and professional documents to the organization by the end of the term, resulting in a number of outcomes for students, the organization, and the course’s role as part of the greater story in the HPU community. Table 1 below summarizes the genres and documents completed as a result of this partnership.

From Homeless to Human Again

Table 1. Genres and Documents Completed

Deliverable	Core Audience
Instructional brochure: Donning Personal Protective Equipment (PPE)	Jobsite volunteers and construction career program trainees
Instructional brochure: THCD's "Breakfast 4 Our Friends" supplementary program	Community volunteers
Career readiness training guidebook	Construction career program trainees
Career readiness training program brochure	Potential construction career program trainees
2020 Campaign flyer	General community audience and potential volunteers
Volunteer brochure	Potential jobsite volunteers

DISCUSSION

At the end of the semester, the documents created in “Tiny Houses and Technical Writing” were used throughout the organization including on social media, on the organization’s web page, and on job sites for volunteer use. The documents were also used to promote the career readiness training program. Additionally, in April 2019, THCD competed in a local grant competition, Future Fund 10, and used many of the class documents at its booths to help professionalize and promote the program’s mission. THCD ended up placing second in the competition, winning a \$12,000 grant from Future Fund 10 to grow its programs, particularly the career readiness training program for which we helped create a guide.

Additionally, the course became an opportunity to tell HPU’s story, as I was asked to write an article about the course for HPU’s university magazine. Titled “Tiny Houses and Technical Writing: A Unique Learning and Community Service Opportunity,” the magazine article served as a fitting bookend to the project, especially considering that THCD was initially selected for the partnership in part because of the belief that it would resonate with HPU’s core audiences.

Finally, the course allowed me, a relatively new assistant professor promoting a new program within the broader university community, to tell a story in various spaces on campus about some of the new Public and Professional Writing minor’s aims, one of which would focus on creating civic-minded, human-centered communicators. Through the course and the article, I debuted the course and the new program to the university with a specific lens that can shape its future.

The students in HPU’s “Tiny Houses and Technical Writing” course ultimately helped the THCD organization streamline communications, increase build productivity, and communicate its narrative to the local community. The course’s focus on “service with” clients the partnering organization assists—as well as its emphasis on human-centered design enacted by storytelling—led to positive outcomes for the students, the THCD organization, and the partnership’s deliverables. The course also propelled the organization’s stories—and the many people THCD services—into the larger community, therefore guiding and inspiring future volunteers for years to come.

It can, of course, be difficult to replicate these same outcomes in a new semester, even if we were to partner with the same organization. It can be even more difficult to forge the same sort of partnerships at other institutions, especially with different student body values and varying foci of community organizations. However, it is my assertion that most any organization building tiny homes in a non-profit, community-engaged capacity, could potentially serve as a fruitful partner for technical writing courses. These organizations are popping up all over the world and in the United States, serving a range of community members, including those experiencing homelessness, veterans, teenage parents, persons fleeing abusive home situations, and more—for example, Community First! Village in Austin, TX, houses 180 residents who formerly experienced homelessness in 200-square-foot tiny homes over a plot of more than 50 acres; its residents can work on-site and farm much of their own food in a community garden. Similar communities are planned, in progress, or have been built in cities such

as Detroit, MI; Syracuse, NY; Nashville, TN; Seattle, WA; Los Angeles, CA; Newfield, NY; Dallas, Texas; Olympia, WA; and Portland, OR (Curbed, 2016).

The core nature of the work of these organizations—building homes and helping community members—in itself is a natural partnership for the genres of documentation for an introductory undergraduate technical writing course. The complex nature of construction—and teaching construction processes to volunteer workers—requires acute attention to user needs, and students in the course practiced these skills. One HPU student in the course, who plans to become an adolescent psychologist, wrote in her course reflection:

This collaboration and my experiences working with a client can potentially help me as a psychologist in the future since I will be working with patients. In this field, it is essential to focus on the needs of the specific patient. It was a huge learning experience getting to create THCD documents based on the clients' needs and then revising them after receiving feedback. It requires you to learn how to put your own thoughts and opinions aside and focus on what is best for the client.

When a university service course can focus on human stories as a pedagogical framework and also help the partnering organization build a narrative that will propel it into the community in deeper ways—in this case, helping the university professional writing program make a name for itself within the university community and helping the organization gain new volunteers and grow its resources and programs through enhanced notoriety, the ground is set for a meaningful, productive relationship. Furthermore, many of the values set forth by non-profit tiny house organizations align with university calls for pedagogies that instill student resilience and growth mindsets. Students also have the opportunity to learn from the stories of the clients these organizations serve; opportunities abound to utilize stories as pedagogical frameworks and include narratives as part of the technical deliverables designed and constructed. These partnerships also allow students to see firsthand the potential impact of technical communication deliverables within an organization, connecting course assignments with real-world efforts and goals which serve a community effort (Jones, 2016; Cardella, Zoltowski, & Oakes, 2012). For all of these

reasons, I encourage undergraduate technical writing instructors to consider partnerships with organizations engaging in housing efforts—particularly on the tiny scale—thus aiding student outcomes, organizations, and the clients they serve. In sum, this topic:

- engages the interests of the current generation of undergraduate students;
- suits introductory technical writing genres (particularly instructional documents, informational brochures, and guidebooks),
- allows for the employment of human-centered design through storytelling, promoting meaningful community engagement and partnerships;
- aids volunteers in their ability to assist with a complex construction project;
- and serves the needs of community members experiencing homelessness who might benefit from the improvement, growth, and promotion of such programs.

Additionally, several of the lessons learned from this teaching case can potentially be applied to partnerships with organizations serving any number of community groups. Most any organization with people at its core can use technical communication documents to document processes, tell organizational stories, and advance its community mission. University technical communication courses seeking service work with community organizations can heed the notion that the collaboration will be enhanced if storytelling and narrative are laced throughout the documentation process, from early site visits and meetings to in-class discussions to the production of final deliverables.

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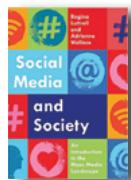
The reviews provided here are those that are self-selected by the reviewers from a provided list of available titles over a specific date range. Want to become a book reviewer? Contact Dr. Jackie Damrau at jdamrau3@gmail.com for more information.

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Social Media and Society: An Introduction to the Mass Media Landscape

Regina Luttrell and Adrienne A. Wallace. 2021. Rowman & Littlefield Publishers. [ISBN 978-1-5381-2909-8. 256 pages, including index. US\$60.00 (softcover).]



Social media as we know it has been around for almost 20 years. New platforms emerge every year, though, meaning that social media constantly feels novel. *Social Media and Society: An Introduction to the Mass Media Landscape* does an excellent job placing this relatively new communication mode into established mass media scholarship. However, as this communications textbook points out often, social media stands apart from other mass media because it is participatory. While traditional mass media communication is one-way, social media is a two-way communication.

One of the most engaging things about this book is its audience awareness. *Social Media and Society* is targeted to Gen Z students—tech-savvy traditional college students who have spent much of their lives interacting with friends, corporations, celebrities, and organizations on social media. The authors try to connect students' prior experience with personal social media with its professional use. Using mass media theories, they explain how and why businesses and organizations use social media the way they do. The final chapters discuss social media analytics and briefly introduce professions within the field. These chapters encourage students to combine their personal experience with the professional social media techniques discussed in earlier chapters and present social media communications as a rewarding career field.

Social media platforms rise and fall rapidly (remember Vine and Google Plus?). So instead of diving into how to use certain platforms, the focused discussions in this textbook are on specific communication areas. After establishing what constitutes social media and defining its framework in the initial chapters, authors Regina Luttrell and Adrienne Wallace dig into specific uses of social media, such as entertainment communication (music, television, movies, and celebrities), medicine, business, and crisis communication. *Social Media and Society* also includes sections on sports communication and civic and political engagement, the two chapters I found the most fascinating. Students who follow college football

game scores and participate in their own commentary on Twitter may find the sports communication chapter especially interesting. Civic-minded students will enjoy reading about how online political discussion has evolved and how protest movements move beyond “hashtag activism” and use social media to organize real-world events.

Social Media and Society would be welcome in an introductory communications course. The chapters are engaging and full of relatable, recognizable, real-world examples of social media successes and failures. Each chapter begins with a short scenario that exemplifies the chapter's focus. The authors also pose interesting questions that will help tie the textbook's content to the students' experience with social media. These questions, introduced with clear, consistent signal phrases like “think about it” and “consider the following,” would work as classroom conversation starters or online discussion board prompts.

Elizabeth Hardin

Elizabeth Hardin is an STC member and a lecturer in the English department at the University of Alabama in Huntsville, where she teaches technical and business writing. She has a master's degree in English and a bachelor's in Computer Science.

Where Is My Office? Reimagining the Workplace for the 21st Century

Chris Kane. 2020. Bloomsbury Business. [ISBN 978-1-4729-7868-4. 262 pages, including index. US\$35.00 (hardcover).]



Chris Kane addresses issues such as agile work and hot-desking as he discusses new workplace practices that can help with employee productivity and even lower costs. His perspective comes from his work as the director of Six Ideas, an organization focused on workplace innovation for groups such as Amazon. One section of *Where Is My Office? Reimagining the Workplace for the 21st Century* is called “The BBC Story: From Analogue to Digital” to reflect part of Kane's work history.

One idea in *Where Is My Office?* is that the focus should be on people and what they do instead of a focus on physical space for getting work done. Another idea concerns a post-pandemic world. This is a world where remote work and flexible work hours may become a

new norm. Kane asks why workplaces have not evolved as work has.

Kane's work with the BBC helped him develop the "Smart Value Formula," which is a concept that combines spaces for work, shopping, and living (p. 140). The formula also came from the "Everything connects to everything else" idea of Leonardo da Vinci (p. 142). The formula is also meant to contribute to an organization's success as Kane argues it has for the BBC with its creation of effective content.

Maybe you have worked in a cubicle, a pod, or at home—so you have some idea of ways to organize workspaces. Maybe you have worked in a way that you can still meet responsibilities as taking care of children, elderly family members, and those with special needs. What Kane has in mind in organizing workspaces might be far beyond what we might imagine. But he does factor in many elements when he writes about how to approach designing effective workspaces.

If you are wondering about what Kane thinks about hot-desking (where multiple workers use the same workspace instead of having a personal desk—as used in a city where real estate prices are high), he mentions it is "loved or loathed in equal measure" (p. 104).

As for Kane's chapter "Delivering Agile Workplaces Across the Nation," the focus here is on the changes he helped to make for the BBC as it moved from what some called wasteland to what is now a center of innovation. He thinks beyond just creating workspaces that are safe and wants to create a place where people and organizations thrive. Kane mentions the synthesis here of "restaurants, shops, bars, cafes, gyms, cultural centers and green spaces" (p. 238) while encouraging research and innovation.

We will have to see if the office is dead after the pandemic, and if we go into a new way of working and using workspace. Kane started writing *Where Is My Office?* before the pandemic hit but finished writing after the pandemic started so he does address this issue of post-pandemic workspaces and more flexible working arrangements in the future.

Jeanette Evans

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Transmedia Frictions: The Digital, the Arts, and the Humanities

Marsha Kinder and Tara McPherson, eds. 2021. University of California Press. [ISBN 978-0-520-38302-9. 396 pages, including index. US\$49.95 (softcover).]



Transmedia Frictions: The Digital, the Arts, and the Humanities presents a collection of 17 varied essays, in two sections identified as "Part I. Medium Specificity and Productive Precursors" and "Part II.

Digital Possibilities and The Reimagining of Politics, Place, and the Self". The editors begin each section with a self-written introduction with the essay topics centering on theories surrounding digital humanities, which include multimedia, film, music, and the performing arts.

The original hardback version of this book was published in 2014. The authors were asked to revisit their original essays because of the passage of time and the nature of technology at the time of the original publication. However, the paperback version published in 2021, despite another significant time passage, sees the essay content still not updated.

The shortsightedness in not updating the essays, especially since those essays that make references to outdated technology, such as CD-ROM, the now defunct Myspace, and even DVDs are going to the wayside with the emergence of streaming television, yet the content also makes references to technology that is still used such as Augmented Reality (AR) and Virtual Reality (VR). As David Wade Crane in his prologue to the 2013 essay, "Linkages: Political Topography and Networked Topology", puts it "despite its anachronisms, I don't think it's [the essay] now just an archaeological relic. Its references may be 'outdated,' but the dynamics it addresses are still in force. Perhaps more so" (p. 211). Similarly other theories presented within *Transmedia Frictions* are still sound, including theories on cultural politics, race, globalization, and ideas such as digital apartheid and other digital divides.

While some may seem outdated, other essays seem to have foretold the importance of technologies on our current reality, such as Caroline Bassett's "Is This Not a Screen? Notes on the Mobile Phone and Cinema" where she discusses the importance of the screen on phones and their emergence as the preferred camera, despite their limitations at the time, emphasizing the idea that the best camera is the one you've got.

Of course, today camera smart phone technology is staggering.

Today the value of *Transmedia Frictions* is on both the historical analyses presented as well as the theories and ideologies, careful consideration should be taken by the reader to reflect how these topics still effect the study of digital humanities. Like any collection of essays, the writing varies from easily digestible to quite dense and demanding, this book is intended for serious scholars of digital arts and humanities and how these technologies affect culture.

Amanda Horton

Amanda Horton holds an MFA in Design and currently teaches graduate and undergraduate courses at the University of Central Oklahoma (UCO) in the areas of design history, theory, and criticism. She is also the director of the Design History Minor at UCO.

About Us: Essays from the Disability Series of The New York Times

Peter Catapano and Rosemarie Garland-Thomson, eds. 2021. [ISBN 978-1-63149-858-9. 286 pages. US\$18.95 (softcover).]



It is obvious that usability and accessibility drive technological innovation and advancement. Not so conspicuous is the source of this usability. For example, many are surprised to hear that the original touchscreen technology of the iPhone was purchased by Apple's Steve Jobs in 2005 from an electrical engineering student sustaining injuries that interfered with his ability to study and work. Many do not know that the updated kitchen products engineered by the Oxo were the original design of a woman unable to work in the kitchen due to her arthritis. A Nuremberg-based watchmaker, also a paraplegic, created the first self-directed wheelchair which was the precursor to the modern bicycle. Or that curb cuts originated with disgruntled wheelchair users in Berkeley, CA. Later curb cuts became universal because they helped strollers, bicycles, baggage handlers, and anybody else navigating wheels.

It is these inspirational stories with which we can relate and that make *About Us: Essays from the Disability Series of The New York Times* so relevant to the technical world. And yet beneath the inspirational stories of life-changing technology, there is humanity—heartache, struggle, alienation, and loneliness. The challenges with

daily problems and the striving to maintain an outlook of positivity are also relevant to the technical world.

In this collection, editors Peter Catapano, Opinion Editor for the *New York Times*, and Rosemarie Garland-Thomson, disabled English professor at Emory University, compiled about 60 essays from the *New York Times'* groundbreaking series on disability. Their intent was to include a wide variety of people—different ages, disabilities, outlooks, and experiences. Their goal of inclusion is explained, “By ensuring that people with disabilities tell their own stories, we intend to avoid and counter the sort of biased, simplified, often demeaning portrayals of them that are produced by an American popular culture designed by and for the nondisabled” (p. xx).

These essays, first published starting in August 2016, are organized in seven sections: justice, belonging, working, navigating, coping, love, family, and joy. By sorting experiences according to these topics, three overall disability challenges are conveyed: inherent challenges, access challenges, and social challenges. Underlying all this is the idea that the American Disabilities Act (ADA) of 1990, while progressive in many ways, was just a small step forward in necessary changes required for people of all disabilities to be integrated into our society. Mentioned at least twice throughout the text is the offensive 1927 Supreme Court decision in which Oliver Wendell Holmes declared, “It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. Three generations of imbeciles are enough” (p. ix). That such a statement was ever made in such a context demonstrates misguided public opinion both past and present.

These first-hand accounts of experiences and obstacles in the lives of disabled people open a glimpse into their worlds. It is through these rare glimpses that we can hope to bridge more of the gap between what the American Disabilities Act aimed to achieve and the realities of change and progress in our increasingly technological world.

Julie Kinyoun

Julie Kinyoun is an on-call chemistry instructor at various community colleges in Southern California. An avid reader, she enjoys reviewing books that help her become a better educator.

Writing the Novella

Sharon Oard Warner. 2021. University of New Mexico Press. [ISBN 978-0-8263-6255-1. 226 pages, including index. US\$19.95 (softcover).]



Among the hundreds of craft books on creative writing, from novels and short stories to creative nonfiction to various craft aspects like character and plot, only a few focus on the novella, and only one—Warner's book, *Writing the Novella*—

teaches how to write novellas using an amazing range of examples and exercises. Warner starts where readers might expect, by defining the novella as more than just a short novel or long story, and then she deconstructs the novella form while guiding readers through writing a novella. The book does an excellent job of not only introducing the novella form but also teaching readers how to write fiction—regardless of form.

Any discussion of the novella must first begin with scope. What is a novella? Who decides? Is there any agreement? Warner provides several definitions of length, such as John Gardner's 30,000–50,000 words; Mary Doyle Springer's more generous 15,000–50,000; to the widest 10,000–60,000 set by Melville House (p. 7). Instead of taking a definitive step herself, she references the sources when referring to a work as a novella. For example, "At 49,445 words, *The Great Gatsby* (1925) just squeezes under the fence set by Springer and Gardner but has room to spare using the Melville House definition" (p. 8). Immediately following the discussion on length, she reveals her own definition; a novella should have a single idea, be set in a specific location over a short time, contain a few characters, and follow a "restricted" point of view.

Given this framework for the novella, Warner reviews the stories and techniques used in three exemplars: *Ethan Frome* by Edith Wharton, *The House on Mango Street* by Sandra Cisneros, and *Fahrenheit 451* by Ray Bradbury, although throughout the book she refers to dozens of other stories.

Each chapter explains something of the craft of writing (story structure, character, plot, scene, and so on) with an emphasis on how they work in novellas. Since Warner frequently contrasts the novella to short stories and novels, readers can apply this craft information to other narrative forms. At the end of each chapter are journaling topics and "time to write" exercises that, in Part 1, help readers plan their novella and, in Part 2, write the draft. The book concludes with

a detailed list of novellas and a useful list of places that publish novellas.

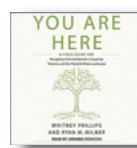
Writing the Novella is easy to read through, and Warner's witty personality pokes through occasionally, but to get a novella out of this text, readers should read the three exemplars (if they haven't) plus at least one or two other novellas and then slowly work through each chapter along with the journaling and exercises. The 15 chapters function as weekly topics in a semester of a Master of Fine Arts program—one with a caring, funny, and expert instructor.

Kelly A. Harrison

Kelly A. Harrison, MFA, teaches technical communication at Stanford University. Formerly, she taught a range of writing courses at San José State University and wrote for various high-tech companies. Kelly is the Associate Editor for *West Trade Review*.

You Are Here: A Field Guide for Navigating Polarized Speech, Conspiracy Theories, and Our Polluted Media Landscape

Whitney Phillips and Ryan M. Milner. 2021. The MIT Press. [ISBN 978-0-262-53991-3. 266 pages, including index. US\$22.95 (softcover).]



If we are ever going to get our democracy back on track and recover from extreme political polarization and the flood of disinformation and other toxic sludge that fuels it, we will need to gain a much better understanding of our troubled information environment than many of us now have.

Taking its title from those trailside maps that help us locate ourselves in confusing environments, *You Are Here: A Field Guide for Navigating Polarized Speech, Conspiracy Theories, and Our Polluted Media Landscape* helps us understand the interlocking complexities of our polluted information ecosystem. Clearly written and brilliantly reasoned, the resulting analysis reaches further, dives deeper, and shines more light into overlooked places than we are likely to encounter elsewhere.

Whitney Phillips and Ryan M. Milner argue that we are amid a "network climate change" (p. 36). New technologies that facilitate creating, copying, and manipulating content, aided by platforms that encourage and monetize unlimited sharing, have greatly

increased the speed and reach of information. When polluted content, whose true source often cannot be identified, flows across communities and international borders it can do a great lot of real-world harm.

While active polluters—"white nationalists and supremacists, clickbait sensationalists, state-sponsored propagandists, and unrepentant chaos agents" (p. 6)—pump out a great deal of muck, they are only part of the problem. Pollution from sources that aren't obviously toxic—citizens sharing a rumor about a pandemic and journalists point-by-point debunking it—can also do harm.

Polluted information owes much of its toxicity to human psychology. The mind uses deep memetic frames to make sense of what it sees (or thinks it sees), and these frames can lock us into thinking patterns and political positions that defy refutation by opposing facts. To illustrate, the authors trace how an age-old satanic subversion narrative undergirds recurring conspiracy theories such as the satanic panics of the 1980s, Pizzagate, and QAnon today.

The roles played by Internet culture, free-speech fundamentalism, blindness to possible harm, and many other factors are also addressed.

Turning their attention to remedies and mitigations, Phillips and Milner offer a valuable, nuanced critique of the limitations of the currently favored approaches—aggressive "fact" checking and media literacy—and advocate that we move beyond these to what they call "ecological literacy" (p. 149), a fuller understanding of how the information environment is networked, and how our actions reverberate to produce help or harm. From this broader perspective, the authors invite us to choose our own "ethics adventure" (p. 181) and offer several suggestions for how we might act strategically from wherever we are situated. At the very least, we can be aware of downstream harm, and be mindful about what we choose to share, challenge, or ignore.

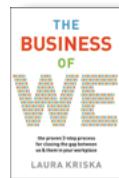
Anyone who is seriously concerned with the fate of our democracy and the problems of our troubled information environment will find much of value here.

Patrick Lufkin

Patrick Lufkin is an STC Fellow with experience in computer documentation, newsletter production, and public relations. He reads widely in science, history, and current affairs, as well as on writing and editing. He chairs the Gordon Scholarship for technical communication and co-chairs the Northern California technical communication competition.

The Business of We: The Proven 3-Step Process for Closing the Gap Between Us and Them in Your Workplace

Laura Kriska. 2021. HarperCollins Leadership. [ISBN 978-1-400-21680-2. 292 pages, including index. US\$19.99 (softcover).]



The engaging, readable *The Business of We: The Proven 3-Step Process for Closing the Gap Between Us and Them in Your Workplace* offers practical advice for our times, when we are frequently interacting with people from many different backgrounds and cultures and when we are increasingly aware of the challenges of collaboration and the risks of getting it wrong. Laura Kriska challenges us to understand that it's not enough to work alongside people from different backgrounds and cultures. It's not enough to proclaim that everyone is welcome or to "treat everyone the same." We must recognize the gaps that exist and make concerted efforts to reach across and close them.

Kriska argues that we need to be aware that our institutions invariably have Us-versus-Them divisions. We need to recognize "WE-building" (p. 15) as a deliberate choice in which to commit to if we want to avoid the damage that we can inadvertently cause to individuals, projects, and organizations. With this approach, *The Business of We* is not only aimed at organizational leaders or managers, but at everyone. She emphasizes that we all have a responsibility to develop our "cultural intelligence" and to apply it in every encounter.

The book offers various tools to help us to lead or participate in these changes. For example, the "Cross-Cultural Continuum" (p. 29) helps us think about the impacts of cultural misunderstandings or blind spots. Certain behaviors or actions might have minimal negative impact and might not require any interventions. Likewise, certain well-intentioned efforts might have minimal positive impact; the continuum helps us to think about how to move past safe, low-impact actions and develop truly game-changing solutions.

Another chapter offers a set of awareness-building exercises including "iceberg stories" and "identity clouds" (pp. 118-122). There's also an "Us versus Them" self-assessment (pp. 134-155) that measures the level of inter-connections that you may have with people from another cultural group. *The Business of We*

discusses executive-level interventions such as employee resource groups, recognition programs, and equitable pay policies, as well as individual actions, such as WE-building communication tips. Kriska shows us that even small talk can create patterns that create an Us-versus-Them environment. She provides a table of examples on small-talk comments that we can rephrase to not only avoid damage but also start bridging those gaps.

Finally, the book drives home the point that people who are in the majority culture must take the lead. Kriska provides another continuum from “Unaware and Oblivious” (pp. 220-222) to “Aware, Willing to Act, but Unsure” (pp. 227-230). For each of these challenges, she provides practical actions to help us move ourselves forward.

I recommend *The Business of We* to anyone who is leading or working within global or diverse teams and anyone who is in a company that is striving to improve collaboration. The practical tips can help you to lead change in your organization and to see how you can get involved in practical ways.

Laurel Beason

Laurel Beason is an STC member and board member of the North Texas Lone Star chapter. She has more than 25 years of experience in technical communication.

Build Your Cultural Agility: The Nine Competencies of Successful Global Professionals

Paula Caligiuri. 2021. Kogan Page Limited. [ISBN 978-1-78966-659-5. 200 pages, including index. US\$29.95 (softcover).]



If you've ever changed your geographic, social, or employment context, you've changed cultures. Being able to recognize when the context changes and adapt rapidly (being culturally agile) is increasingly a survival skill. In *Build Your Cultural Agility: The Nine Competencies of Successful Global Professionals*, Paula Caligiuri provides a concise yet comprehensive summary of what you need to learn based on both broad experience and formal research.

Caligiuri defines eight cultural dimensions we must master to achieve agility: formal vs. informal, egalitarian vs. hierarchical, individualist vs. group, transactional vs. interpersonal, direct vs. indirect communication, fluid vs. time-controlling, external vs. internal control, and

balance vs. status. Many of these will be familiar. In the rest of the book, she defines nine competencies required to deal with these orientations. For example, tolerance of ambiguity (of uncertainty about how your context has changed) can be attained by listening, observing, asking questions, inviting feedback, delaying judgment, avoiding stereotyping, and aiming for consensus. The other competencies are curiosity (eagerness to learn), resilience (recovering from failures), humility (judging only once you fully understand), relationship-building, perspective taking, cultural adaptation (adopting new behavioral norms), cultural minimization (enforcing universal norms, such as safety regulations), and cultural integration (achieving consensus on norms among teammates from different cultures).

Rather than just describing agility, Caligiuri provides recommendations in each chapter about how to achieve it and recommends working on a manageable number of things simultaneously to avoid feeling overwhelmed. She provides frequent short self-tests to help you understand yourself and your needs, and correctly emphasizes the need for time, focus, practice, and the need to stretch one's “muscles” gradually to avoid culture shock. The principles are generally clear, but although Caligiuri begins each chapter with a case study, more short, illustrative examples would have made many points less abstract.

The writing is generally clear, but Caligiuri's nomenclature isn't always obvious. She also occasionally falls into jargon like “to onboard a new member” (p. 25); “to pre-mortem” (p. 71); “train on the expectation of subjective norms” (p. 155); and “to exit those who are not behaving” (p. 157). She repeatedly mentions one's genetic characteristics (p. 32), hormones (p. 62), limbic system (p. 148), and prefrontal cortex (p. 149). This seems, at best, misplaced and overly deterministic. There are also curious omissions, such as waiting until pages 38 and 42 to recommend learning the culture's language and social conventions before entering the culture.

Though there's no substitute for experiencing a new culture, *Building Cultural Agility* provides great preparation before you dive in. Though intended primarily for business readers, the book will help in other contexts, including tourism and working in interdisciplinary teams.

Geoff Hart

Geoff Hart is an STC Fellow with more than 30 years of writing, editing, translation, and information design experience. He's traveled widely and worked with authors from many cultures. He's the author of two popular books, *Effective Onscreen Editing and Writing for Science Journals*.

The Corporate Terminologist: Terminology and Lexicography Research and Practice

Kara Warburton. 2021. John Benjamins Publishing Company. [ISBN 978-90-272-0849-1. 250 pages, including index. US\$149 (hardcover).]



Kara Warburton's *The Corporate Terminologist: Terminology and Lexicography Research and Practice* describes the benefits and methods of terminology management in corporations. Before reading this book, my only exposure to corporate terminology were a few LinkedIn conversations asking for community input on the topic. But, as Warburton points out, the practice of terminology is not new. What is new is the adoption of this practice to the private sector.

The Corporate Terminologist is specifically written with the private sector in mind. Warburton identifies where conventional terminology methods and practices diverge for corporations. To that end, she organized the book into four parts: Foundations of terminology, commercial terminography, planning a corporate terminology initiative, and implementing and operating the termbase.

Warburton establishes the value of terminology to corporations when she says that terminology can "increase employee productivity, reduce production costs, reduce time-to-market, and increase customer satisfaction" (p. 42). Such objectives make it clear that there are benefits both to employees, particularly writers and translators, as well as to the corporations that employ them. I felt that Warburton wrote *The Corporate Terminologist* mostly with large corporations in mind. While the information provided is useful to all corporations, I felt that smaller corporations might experience a different path to establishing a terminology management program. For instance, smaller corporations might implement a termbase within a team or department to test methods and practices before working through a detailed proposal. Warburton even acknowledges that corporate terminology is

"uncharted territory" and that this book is meant to "raise awareness of the terminology discipline" (p. 230).

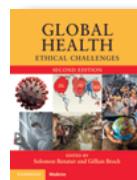
If you're looking to establish a system for managing terminology in the private sector, Warburton does a wonderful job of introducing all the basic concepts, identifying how terminology management can benefit corporations, and providing methods for building a terminology program that works for you.

Sara Buchanan

Sara Buchanan is an STC member and a content strategist at LCS in Cincinnati, OH. In her free time, she's an avid reader, enjoys cooking, and dotes on her cats: Buffy and Spike.

Global Health: Ethical Challenges

Solomon Benatar and Gillian Brock, eds. 2021. 2nd edition. Cambridge University Press. [ISBN 978-1-108-72871-3. 510 pages, including index. US\$64.99 (softcover).]



It is difficult to know where to begin with my review of the second edition of *Global Health: Ethical Challenges*. I had no idea what I was in for when reading this book in terms of learning what global health is, what it is connected to, and the many controversies surrounding this topic. The sheer comprehensiveness of the book is one of its many strong points. It is an anthology of global contributors with 38 chapters divided into six sections: definitions and descriptions; ethics, responsibilities, and justice; poor health responsibilities; environmental/ecological considerations; cross-cultural perspectives; and shaping the future. Each chapter, although uniquely written, covers 1) how we exacerbate poor global health; 2) what we should do about it; and 3) why we should do something about it. The learning curve from this book is immense and one that is applicable to professionals in all disciplines.

Global Health is an example of a truly interdisciplinary work that demonstrates the multidimensional complexity of global health. This one text is applicable to a variety of workplace environments and courses including philosophy, economics, environmental science, technical communication, global studies, cultural studies, gender studies, and so much more. Each chapter addresses head on the disparities of global health, explores the depth and breadth of what global health means and what

influences health and well-being, and dispels the seemingly easy fixes that are part of national, sometimes global, controversies and debates. For instance, the commonly held belief that globalization is a positive factor in improving global health is disputed in several chapters with substantial research, philosophical reasoning, and real-world examples as support. The idea that if countries grow economically then health will naturally follow is analyzed in detail and readers are provided with arguments that expose them to the intricate and expansive field of global health.

It is asserted throughout the book that health is a human right. Although that argument seems straight-forward enough, what makes it a contested argument is that health extends beyond the biomedical. There are many factors that determine health and well-being, factors that are national and global issues themselves, including access to and distribution of health facilities, goods, and services, essential food, shelter, sanitation, and safe water to name just a few. It was incredibly mind-opening to see how national debt, arms trade, politics, ecology, and a multitude of social determinants all relate directly to health. *Global Health* was written before COVID-19 so it does not provide a comprehensive review of the implications and ramifications of the virus on global health; however, the book presents arguments about urgent issues at stake that need immediate attention, such as how “climate change could be the biggest threat to global health in the twenty-first century” (p. 284) because it threatens to affect “food price, famine, conflict, and mass migration” (p. 285). Although the book is immense, it is easily accessible, affordable, and highly recommended for upper-level undergraduates, graduates, and professional audiences from all disciplines.

Diane Martinez

Diane Martinez is an associate professor of English at Western Carolina University where she teaches technical and professional writing. She previously worked as a technical writer in engineering, an online writing instructor, and an online writing center specialist. She has been with STC since 2005.

Extra Bold: A Feminist, Inclusive, Anti-racist, Nonbinary Field Guide for Graphic Designers

Ellen Lupton, et al. 2021. Princeton Architectural Press. [ISBN 978-1-61689-918-9. 220 pages, including index. US\$29.95 (softcover).]



The subtitle says it all, *Extra Bold* is in fact the feminist, inclusive, anti-racist, non-binary field guide that designers have been looking for, and if they haven't been looking, they should have been. This book is a collection of essays written by a collective of authors who come from a diverse range including women and men of color as well as authors who identify as non-gender conforming. *Extra Bold* is an excellent opportunity for practicing graphic designers, and anyone else who struggles with these topics, to better inform themselves about current issues in design. You don't even have to be a designer to enjoy or be informed by the book.

Extra Bold is broken into three sections that are identified as theory, history, and work. It is interesting to note that all headlines and titles throughout the book are set entirely in lowercase, this is explained as a nod to bell hooks, the Black feminist author and social activist, who uses lowercase letters to push back against patriarchal naming systems, similarly *Extra Bold* pushes back against traditional typographic hierarchies. Besides the well-written, informative essays, the book is also full of illustrations, diagrams, and infographics that support the text, which also sometimes serve as comic relief, something that is welcome in a book full of very heavy subjects. One example is an infographic by Kim Goodwin on page 35 that does an excellent job of helping users identify if they are “mansplaining” or not. For those who tend to get ‘splained to, they can share this helpful graphic with the ‘splainers (p. 34).

The book tackles serious subjects but explains them in a way that is very accessible. Besides the diverse group of authors, *Extra Bold* also includes interviews from designers and design students about their personal industry experiences. In an insightful interview with Tré Seals he remarks, “I realized that when a single gender and race dominates an industry, there can only be (and has been) one way of thinking, teaching, and creating” (p. 76). *Extra Bold* also contains helpful tips for anyone on how to come out at work, or to share your pronouns in the workplace. Additionally, *Extra Bold* goes beyond issues of gender and race to include information about design and (dis)ability.

If you are still wondering if this book will be right for you, consider this, it will be useful to practicing designers and students who are looking to navigate the changing world of design around them. It will also be useful to instructors who wish to find ways to have difficult discussions regarding race, inclusivity, and gender in the classroom. Or perhaps you thought that these are issues that don't affect design, if so then you might need to read the book twice. After all, as the authors remind us, "Eurocentric principles of modern design were conceived as egalitarian tools of social progress, yet they served to suppress differences among people across the globe" (p. 9).

Amanda Horton

Amanda Horton holds an MFA in Design and currently teaches graduate and undergraduate courses at the University of Central Oklahoma (UCO) in the areas of design history, theory, and criticism. She is also the director of the Design History Minor at UCO.

Becoming a Writer, Staying a Writer: The Artistry, Joy, and Career of Storytelling

J. Michael Straczynski. 2021. BenBella Books. [ISBN 978-1-950665-88-4. 230 pages, including index. US\$17.95 (softcover).]



What is it like to write for a living? Michael Straczynski addresses this question in part in *Becoming a Writer, Staying a Writer: The Artistry, Joy, and Career of Storytelling*. He also addresses the question of why people write when he quotes Stephen King as

King notes, "You do it because to *not* do it is suicide" (p. 2).

Straczynski also notes that he has "been fortunate enough to make a living as a writer for over forty years" (p. 1) so seeing what he has to say in *Becoming a Writer, Staying a Writer* should provide valuable insight. For example, Straczynski notes in the section on staying a writer that the Three Legged Stool Theory can help as the writer should always have "at least three streams of revenue, and three forms of creative expression" to survive as a writer (p. 196). Straczynski continues that when he first started out as a writer, he worked on newspaper articles, fiction, and radio.

If you wonder what it can be like to write for a living outside of technical writing, or besides technical writing, *Becoming a Writer, Staying a Writer* provides

some insight. Straczynski addresses the young writer in the first part of the book on becoming a writer and includes a chapter to the college or university student. In the second part, he addresses the person who is already established as a writer and what that writer can do to stay employed and working successfully in the field. The book also includes a section on writer's block as Straczynski says it does not exist.

Jeanette Evans

Jeanette Evans is an STC Associate Fellow; active in the Ohio STC community, currently serving on the newsletter committee; and co-author of an *Intercom* column on emerging technologies in education. She holds an MS in technical communication management from Mercer University.

Media Technologies for Work and Play in East Asia: Critical Perspectives on Japan and the Two Koreas

Micky Lee and Peichi Chung, eds. 2021. Bristol University Press. [ISBN 978-1-5292-1336-2. 296 pages, including index. US\$105.00 (digital).]



As the COVID-19 pandemic drags on and continues to change the way we work, study, and play, *Media Technologies for Work and Play in East Asia: Critical Perspectives on Japan and the Two Koreas* is a timely riveting page-turner if you are interested in technical communication studies, cultural studies, game studies, or political economy and trying to answer this question: how work and play are (re)defined through technology-mediated interactions in the emerging techno-cultural spheres of Northeast Asia?

It is considerably challenging to tackle this question, but the editors smartly crack it by focusing on three themes: gender and sex online, digital media governance and regulations, and techno-identity and digital labor condition. Under this thematic framework, the editors break this big question into five parts: (1) How does digital technology change labor practices and industry structure through gameplay? (2) How does play foster sociality in a corporation-dominated digital environment? (3) How does digital technology foster meanings of work and play? (4) What new meanings do concepts such as intellectual property, data privacy, and sociality have in these countries? (5) How is the idea of region created via media contents?

The three themes make up the book's three chapters, of the book, which is an explicit organizational method. The five thematic questions work as the implicit organizational method since they appear in each chapter and remind the audience of the "politically-contested and richly contextualized" nature (p. xii) of technology-mediated work and play shaped by local and regional cultures.

This is the most interesting thing about *Media Technologies for Work and Play in East Asia*: it progresses from the academic dialogue about transnational communication to a more grounded level to make sense of the cultural connections between Northeast Asia and the West. Cultures are part of the user experience. This book proves this point not by comparing Northeast Asia to the West, but by examining the local practice where new meanings and features emerge. For example, chapter one contextualizes digital gender in Northeast Asian collectivist culture and patriarchal social relations. It shows that while e-commerce and digital gaming users experience different gender expressions and challenge gender relations, the offline gender reality constrains online gender experience. Chapter two discusses whether regulations can control technologies or not. It finds out a fear for technology in regulations as "technologies are believed to eradicate a respect for the collective when members indulge in too many individual activities" (p. 99). Chapter three presents three new techno-cultural spheres: esports, robot therapy, and pachinko, which yield new labor productivity and transformation and further lead to new identity transformation.

The three countries in this region, Japan and the two Koreas, have been culturally related yet politically contentious both in the past and in the present, generating in them a myriad of user cultures mediated by this specific regional background. Contextualizing global technology diffusion in such a region is essential to understand technical communication in transcultural contexts. The unique ecology of media technologies for work and play deserves our attention. The insights from *Media Technologies for Work and Play in East Asia* also can be applied and extended to other societies.

Lin Dong

Lin Dong, PhD, is a lecturer who teaches Professional and Technical Writing at the School of International Studies in the University of International Business and Economics, Beijing, China. She won the Best Paper Award at 2020 IEEE ProComm Conference.

Advanced Creative Nonfiction: A Writer's Guide and Anthology

Sean Prentiss and Jessica Hendry Nelson. 2021. Bloomsbury Publishing. [ISBN 978-1-350-06780-6. 334 pages, including index. US\$30.95 (softcover).]



Many texts on how to write creative nonfiction (CNF) mimic the craft lessons for fiction, for example, covering plot, setting, character development, and so on. Others consider only the essay, while some address only a handful of forms or subgenres like memoir and travel writing.

Advanced Creative Nonfiction: A Writer's Guide and Anthology sets a new standard for teaching creative nonfiction by covering a wide range of craft topics, explicating old and emergent forms, and including a unique anthology.

The book has two parts, craft and anthology. Fifteen chapters on craft cover subjects from the history of CNF to dramatic design, from phenomenal truths to ethics and credibility. Each craft chapter begins with a list of readings from the anthology that exhibit the qualities of craft covered in the chapter. Next, a vignette demonstrates some aspect of the craft, a scene or an excerpt written by either of the two authors. The vignette is then discussed in the core of the chapter alongside the craft.

After this core information comes a section called "Reading as a Writer," with typically three exercises connecting the craft to works in the anthology, and another section, "prompts," for practicing the craft. This structure lends itself to the typical 15-week semester, making this an ideal organization for upper-division or graduate courses.

Early on, the *Advanced Creative Nonfiction* establishes how a writer functions: "as an explorer, a map-maker, a diver into deep waters of memory and experience" (p. 40). No matter the form, CNF writers ask, "what and why we want to know about" (p. 39) the subject of the writing. That writing is treated as an active process of exploring, discovering a central question but also finding an answer, what the authors call the knot of meaning—something a reader can make their own.

Prentiss and Nelson's approach is not to examine the product's elements (the essay, the memoir, and so on) so much as to focus on the active work of writing, demystifying that work for those learning the trade, and this is one way the text sets a new standard in creative

writing texts. Each chapter reads as an engaging lecture, a lesson on how to process, and more importantly, how to be a human who writes.

The book's second part is an anthology of 26 works that defy summary—poetry, found stories, erasure, a play, graphical stories. The anthology alone is worth the purchase.

Most textbooks these days also have a companion website, and this one (<http://www.bloomsburyonlineresources.com/advanced-creative-nonfiction>) consolidates definitions of all terms (sorted both alphabetically and topically). The authors also created a podcast wherein they converse with authors from the anthology, but some of the episodes were recorded with substandard sound quality, this is, they weren't recorded in a studio. Still, the discussions I listened to were engaging, and they offer curious writers a glimpse into the type of material covered in this text.

Kelly A. Harrison

Kelly A. Harrison, MFA, teaches technical communication at Stanford University. Formerly, she taught a range of writing courses at San José State University and wrote for various high-tech companies. Kelly is the Associate Editor for *West Trade Review*.

The Artful Dickens: The Tricks and Ploys of the Great Novelist

John Mullan. 2020. Bloomsbury Publishing. [ISBN 978-1-4088-6681-8. 448 pages, including index. US\$28.00 (hardcover).]



The work of Charles Dickens has been read, reviewed, analyzed, and criticized. But, according to John Mullan, many who have written about him have not answered the question, "What is so good about Dickens's novels?" (p. 1). *The Artful Dickens: The Tricks and Ploys of the Great Novelist* is his answer.

Mullan answers his own question in each chapter by pointing out characteristics of Dickens's novels that made his work not only popular but good. Chapter titles include "Laughter," "Speaking," "Foreshadowing," and "Smelling." Dickens was an experimenter. His writing may not have been as refined as that of his contemporaries, but his "special mix of unliterariness and formal daring," (p. 3) while criticized by others as faults, pleased his readers. Dickens simplified first impressions of characters, seeing them from the outside,

rather than delving into their psychology. He moved between present and past tense within the same chapter and the same novel. He developed new forms of writing, such as the ghost story. He invented names that have entered the English language and are still in use today. He found the humor in almost every situation, even the most frightening. He invented words. He allowed his characters to speak in the hyperbole of everyday speech. Of all these "tricks and ploys," Mullan believes the pattern of repetition, "an audacious poetry of repetitiousness," (p. 391) that pervades Dickens's prose is "the very essence of Dickens's style" (p. 389).

The Artful Dickens includes many excerpts from Dickens's novels to illustrate the author's points. If there is not an excerpt, Mullan supplies a plot synopsis. These are in-depth examinations of the novelist's prose by an expert. While a casual reader of Dickens may gain added insight into the novelist's style, the many plot details from many novels interwoven with other information becomes somewhat intense and can detract from understanding the "goodness" of a particular characteristic. Someone with more extensive knowledge or study of Dickens and other Victorian novels would likely be the best audience for this book.

An analysis of a Victorian novelist's work may not seem to contain technical communicator lessons. But we can learn from Charles Dickens and from *The Artful Dickens*. Two things stand out. First, Dickens knew and wrote for his audience, a cardinal rule for any communicator. Like many novels of the period, Dickens's novels appeared in installments. He wrote each installment separately, and "was always feeling for the public's responses" (p. 4). Second, he edited his text relentlessly, until it was time for it to be printed. His edits are visible in the manuscripts that still exist where Dickens "meticulously adjusts his diction and phrasing" (p. 11).

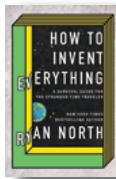
Mullan considers Dickens somewhat of an outlier among his contemporaries as well as a precursor to modern writers. The bibliography listing Dickens's novels and other works referred to in *The Artful Dickens* provides a source for comparison.

Linda Davis

Linda M. Davis is an independent communications practitioner in the Los Angeles area. She holds an MA in Communication Management and has specialized in strategic communication planning, publication management, writing, and editing for more than 25 years.

How to Invent Everything: A Survival Guide for the Stranded Time Traveler

Ryan North. 2018. Riverhead Books [ISBN 978-0-7352-2014-0. 438 pages including index. US\$27.00 (hardcover).]



Time travel is a common and popular theme in both literature and film. From H.G. Wells to *Back to the Future*, people have imagined how time travel could work and alter their lives, perhaps by travelling to the past to make a sound investment or place a winning bet on a sporting event. However, very few sources center on travelling through time with the intention of inventing *everything* and explain to you how to do so. Humorist Ryan North, perhaps best known for his Dinosaur Comics, wears the hat of a technical communicator and presents a fun, but serious look at how to re-create the modern world if you are stranded in the past, in *How to Invent Everything: A Survival Guide for the Stranded Time Traveler*.

The book's framing narrative is that you are a time traveler stranded in the past, reading the time machine repair guide. In the likely event that you cannot fix the time machine, you'll have to build modern society from scratch, with the guide's help. While this sounds fantastical in concept, it sets the tone for what is essentially a reference book on discovering everything, from breeding dogs from wolves, to creating charcoal to filter water, to composing "Ode to Joy" with your name on the manuscript.

In the introductions, North credits a technical writer (himself in another timeline) with creating the book's content. Accordingly, much of the content is relatively technical in nature, although explained so any common person/stranded time traveler can follow along and understand. Each section lists the invention, a relevant quote about it, a description, what people did without it before it was invented, when it was invented, the prerequisites of inventing it, and how to invent it. For example, without inventing glass you would not have corrective lenses or microscopes. To invent it no prerequisite inventions are needed unless you want to make artificial glass. Next, not only instructions on how to create glass are provided, but also how to form glass into useful objects, such as a telescope. Footnotes help flesh out the process and add levity to the content.

After reading *How to Invent Everything*, you may not be ready to create a combustion engine from scratch, although all types of engines are described.

Throughout what could be a dense encyclopedia of information, North sprinkles humorous observations and informative footnotes about actual history, such as the "wandering womb" theory from ancient Greece that persisted until the 1800s. The content reads like a high-level summary of what you would expect to learn in an overview course of just about everything, including basic chemistry to music composition to computer logic and the first 768 digits of pi for reference. For anyone who would like a general explanation of how the modern world works explained at a high school level, invent moveable type and bookbinding, pick up a copy of this book, warm up your flux capacitor, and prepare for a delightful travel through time.

Timothy Esposito

Timothy Esposito is the Manager of Logistics Documentation at Oracle, an STC Fellow, the STC Secretary, and a past president of the STC Philadelphia Metro chapter with more than 20 years of technical communication experience.

Creative Writing for Social Research: A Practical Guide

Richard Phillips and Helen Kara. 2021. Policy Press. [ISBN 978-1-4473-5598-4. 212 pages, including index. \$47.95 (softcover).]



Connect with the heart and the head will follow. The return journey takes a little longer.

This is the idea behind *Creative Writing for Social Research: A Practical Guide*. It's a daunting task since it often flies in the face of traditional scholarly conventions. Like, for example, citing in the text "(Smith, 2008)." Instead of Smith said *this* and Jones said *that* people like to know who Smith *is*, as in: "Economist Jayson Smith found that . . ." And the dozens of other examples of "academese."

The authors emphasize that social researchers use creative writing in all aspects of their work, from exploring and analyzing data, to presenting and disseminating their findings. And they insightfully expand their definition of the term, to include a wide range of genres, such as: letters and stories, poems and diary entries, written dialogues and playscripts.

You can divide creative writing into two parts: One includes writing techniques like rhythm and

repetition; figurative language and rhetorical questions; conversational language and changing the parts-of-speech of words (this one from Truman Capote: “There was a group of Australian army officers *baritoning* ‘Waltzing Matilda.’”)

The second is: dissecting the meaning of the word *story*. At its simplest, a story contains three elements: people, place, and plot (the 3 P’s): (1) People are interested in *people*; (2) the idea of *place* engages the physical senses; something important even for anchoring more abstract ideas; and (3) plot. And this is *crucial*: In academic and scholarly writing, you can think of plot as the thesis or hypothesis: the theme you are pursuing throughout the written piece; the major thread that runs throughout it.

Some problems? The authors succumb to academic jargon; words like polyvocal, polytextual, and polygraphical (p. 11). They compare creative writing with social research, that they refer to as its “canonized counterpart” (p. 3). “They mention two researchers who collaborated in an autoethnographic piece. . .” (p. 67). Yet far less jargon than scholars tend to use.

Just one unforgivable item: a 48-line paragraph on page 14. Optimal length for a paragraph is 10-15 lines *maximum*; the best length for understanding *and* remembering.

The authors do finally make an irresistible case for using creative writing in social research (p. 4):

“What is known in prose might be known differently in poetry.”

“Reaching larger and more diverse audiences than conventional research writing.”

Reaching readers emotionally . . . in ways that formal academic writing cannot.”

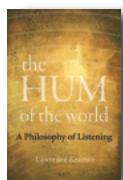
“Of course, the road to discovering often starts with definitions. “Reaching,” here can mean many things, such as understanding or remembering, and not least: *enjoyment*.

Steven Darian

Steven's most recent books are *Technique in Nonfiction: The Tools of the Trade* (2019); *The Wanderer: Travels & Adventures Beyond the Pale* (2020); and *The Heretic's Book of Death & Laughter: The Role of Religion in Just About Everything* (due out late 2021).

The Hum of the World: A Philosophy of Listening

Lawrence Kramer. University of California Press. [ISBN 978-0-520-38299-2. 244 pages, including index. US\$22.95 (softcover).]



Lawrence Kramer's *The Hum of the World: A Philosophy of Listening* contends that the “rise of digital technology” (p. 13) has so intensified the power of the visual that it obscures the central role of sound in how we know things. The visual both reduces “complex ideas . . . to cliché” (p. 13) and separates the observer from the observed, resulting in an alienated, superficial relationship to reality that can be resolved by reconnecting knowledge with sound.

Sound is experienced as the audible, what we physically hear, but arises within a context Kramer dubs the “audible”—the inserted “a” signifying what can be heard potentially rather than. In language, we sense the audible when we know what we think, but cannot yet put into words. This audible “pause” is also sensed through music, and simultaneously discloses “what we know about music” and “what music enables us to know” (p. 18).

The audible reveals itself through a “sympathetic resonance” between the body and sound that “dissolves the distinction between subject and object” (p. 20), so that the “spirit becomes an object of sense” (p. 20) and reveals “the presence of a material body with spiritual resonance” (p. 176), but without relapsing into the ideological or religious dogma represented by the traditional “fatal alternatives of blind faith or blind empiricism” (p. 23).

Sympathetic resonance and awareness of the audible occur because the body, like life itself, is primarily defined not only by how it looks, but also by how it sounds. “To be alive, the organs must be non-silent,” and must “therefore harbor the potentiality of resonance independent of any actual resonance. . . organs resound from the place of the audible” (p. 200). A stethoscope reveals the “body as speaker” by amplifying “the body's own voice, which is not its speaking voice” (p. 200), but rather the sounds of a beating heart, breathing lungs, and flowing blood.

A traditional metaphor for describing the audible is the Aeolian harp, which produces sounds and tones when wind blows through its strings. The body is like an Aeolian harp. It resonates with the flow of potential sound carried by the wind and reconnects the listener's body and consciousness with the audible, or the

“perceptible potentiality of sound” (p. 31), and the life force itself.

Kramer organizes *The Hum of the World* in neither a “chronological or topical arrangement (p. 2),” but rather as a musical composition with theme and variation, so that “certain themes keep returning, as they might in a piece of music” (p. 3), and the text can be read “consecutively or piecemeal, in no particular order” (p. 2). The book’s form mirrors its theme: like music, it mixes localized variations to reveal their underlying commonality, as varying passages in music are unified by a single key signature.

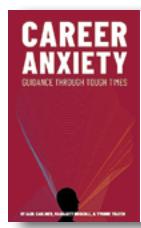
Kramer’s argument resembles Michael Polanyi’s thesis that we can know more than we can tell, or as Kramer puts it, that we can “understand cognition apart from consciousness” (p. 77). Sound, language, and especially music testify to this epistemological principle, as does Kramer’s demanding, imaginative, and rewarding book.

Donald R. Riccomini

Donald R. Riccomini is an STC member and was a senior lecturer in English at Santa Clara University, where he specialized in engineering and technical communications. He previously spent twenty-three years in high technology as a technical writer, engineer, and manager in semiconductors, instrumentation, and server development.

Career Anxiety: Guidance Through Tough Times

Saul Carliner, Margaret Driscoll, & Yvonne Thayer. 2021. International Career Press. [ISBN 979-8-51958-589-7. 422 pages. US\$9.99 (digital).]



The world can be an unkind place for anyone forced to seek new employment in uncertain and changing times. If you are one of these people, Saul Carliner, Margaret Driscoll, and Yvonne Thayer have published a pragmatic handbook worth looking into.

The targeted readers include technical communicators, although recommendations apply to other professionals as well. The authors’ first words in the preface set *Career Anxiety: Guidance Through Tough Times* as “a must-read for professionals and skilled workers approaching the middle and later stages of their careers.” It aims to help people within this demographic who are employed or who were recently employed

“navigate what is anticipated to be an increasingly challenging job market and to plan for their long-term employability” (“Preface,” paras 1 and 6).

You’ll find the book’s structure easy to follow. Section I describes the wide-ranging changes that have occurred since the 1970s. The next section goes into how these changes affect employability and, in general, how to pursue jobs. More interesting and useful, in my opinion, is the final section, which offers many recommendations for maintaining employability once you’ve landed a job that you like.

Each chapter follows the pattern “what’s changed,” “what remains the same,” and “so what,” which offers specific points of advice. You won’t find cuteness or the overly familiar “best of 10” tone. Instead, you get several interesting points, including many I have seldom if ever seen discussed in books. For example, how can you approach employers if you have no college degree or the wrong one? What specific steps can you take to avoid problems in your “digital vapor trail”—things you’ve said online (“The Death of the Resume and the Changing ‘Paperwork’ of the Application Process,” para 7)? How should you proceed if you’re stuck in a job you dislike? Some lessons are taught through “fictional illustrations,” familiar to you as “personas.”

By far the most effective element is the 39 detail-packed tables. The authors graphically present, for example, components of background checks, best markets for several kinds of jobs, and educational requirements for jobs involving differing skill and pay levels. Many tables are divided by age group. Thus, one table ambitiously defines five generations of workers based on their “relationship to technology” (“An Increasingly Diverse Workplace,” Table 8-3).

If you find yourself in the authors’ target audience, buy *Career Anxiety* and use it. Digest its realistic analysis of the employment scene and its wealth of supporting detail that helps you understand that analysis, all conveyed in a hopeful tone. It’s then up to you to apply what Carliner, Driscoll, and Thayer have provided.

Avon J. Murphy

Avon J. Murphy is an STC Fellow who serves the Society as a researcher and as editor of the annual *Summit Proceedings*. A retired college professor and government writer, he is a technical editing contractor and the principal in Murphy Editing and Writing, based in western Washington.



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